1491

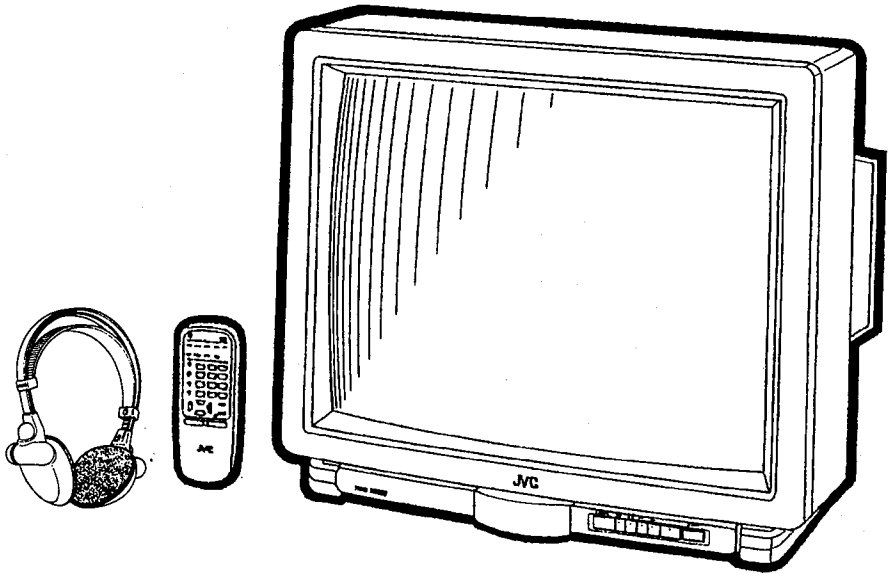
JVC

SERVICE MANUAL

COLOR TELEVISION

AV-35BH4(US)

BASIC CHASSIS
GX V



CONTENTS

■ SPECIFICATIONS 2
■ SAFETY PRECAUTIONS 3
■ FEATURES 4
★ OPERATING INSTRUCTIONS (APPENDED) . . . . . 1-1~1-24
■ SPECIFIC SERVICE INSTRUCTIONS 5
■ SERVICE ADJUSTMENTS 10
■ PARTS LIST 23
★ STANDARD CIRCUIT DIAGRAM(APPENDED) . . . . . 2-1~2-36
■ CORDLESS HEADPHONE (RECEIVER) 43

COPYRIGHT © 1993 VICTOR COMPANY OF JAPAN,LTD.

No.50796
Jul. 1993

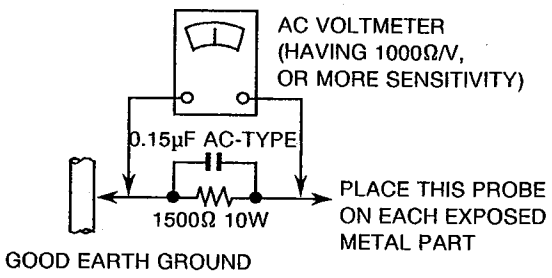
SPECIFICATIONS

Item	Content
Dimensions (W×H×D)	36-1/8"×29-1/2"×23-7/8" / 91.9cm×74.8cm×60.5cm
Weight	166.8lbs / 75.8kg
TV System and Color, Sound System	
TV RF System	CCIR(M)
Color, Sound System	NTSC,BTSC (Multichannel Sound)
TV Receiving Channels and Frequency	
VL Band	(02~06) 54MHz~88MHz
VH Band	(07~13) 174MHz~216MHz
UHF Band	(14~69) 470MHz~806MHz
CATV Receiving Channels and Frequency	(Quartz Synthesizer System)
Low Band	(02~06,) by (02~06)
High Band	(07~13) by (07~13)
Mid Band	(A~I) by (14~22)
Super Band	(J~W) by (23~36)
Hyper Band	(W+1~W+28) by (37~64)
ULTRA Band	(W+29~W+84) by (65~94,100~125)
Sub Mid Band	(A-8, A-4~A-1) by (01, 96~99)
	(54MHz~804MHz)
TV / CATV Total Channel	180 Channels
Intermediate Frequency	
Video IF Carrier	45.75MHz
Sound IF Carrier	41.25MHz (4.5MHz)
Color Sub Carrier	3.58MHz
Antenna Input Impedance	75Ω (VHF / UHF) Terminal, F-Type Connector ×2
Power Input	120V AC, 60Hz
Power Consumption	215W (max.) ,145W (avg.)
Picture Tube	35" measured diagonally , Full Square
Viewable Picture Size (W×H)	28"×21" / 71.1cm ×53.3cm
High Voltage	33.0kV ±1.0kV (at zero beam current)
Speaker	3-3/16"×4-3/4" (8×12cm) Oval type, 8Ω ×2
SP Terminal	6~8Ω
Audio Power Output	5W+5W
Input (1,2)	Video : 1 Vp-p 75Ω (RCA pin jack)
	Audio : 500 mV rms (-4dBs), High Impedance (RCA pin jack)
Line Output	Video : 1 Vp-p 75Ω (RCA pin jack)
	Audio : 500 mV rms (-4dBs)
	Low Impedance (400Hz when modulated 100%) (RCA pin jack)
S-Video in	Y:1 Vp-p positive (negative sync provided,when terminated with 75Ω)
	C:0.286 Vp-p (burst signal, when terminated with 75Ω)
Variable Audio Output	More than 0~1550mV rms (+6dBs)
	Low Impedance (400Hz when modulated 100%) (RCA pin jack)
AV Compulink Input	Audio : 3.5mm mini jack
	VCR : 3.5mm mini jack
Tube	1
IC	26(In TV), 2(In Remocon)
Transistor	95(In TV), 2(In Remocon)
Remote Control Unit	RM-C672
Cordless Headphone	HA-W55T

Design & specification subject to change without notice.

SAFETY PRECAUTIONS

1. The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection,no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual many create shock, fire, or other hazards.
4. **Use isolation transformer when hot chassis.**
   The chassis and any sub-chassis contrained in some products are connected to one side of the AC power line. An isolation transformer of adequate capacity should be inserted between the product and the AC power supply point while performing any service on some products when the HOT chassis is exposed.
5. **Don't short between the LIVE side ground and NEUTRAL side grounding or EARTH side ground when repairing.**
   Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE (⊥) side GND, the NEUTRAL (⏚) side GND and EARTH (⏚) side GND. Don't short between the LIVE side GND and NEUTRAL side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and NEUTRAL side GND or EARTH side GND at the same time.
   If above note will not be kept, a fuse or any parts will be broken.
6. If any repair has been made to the chassis, it is recommended that the B_1 setting should be checked or adjusted (See ADJUSTMENT OF B_1 POWER SUPPLY).
7. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approvided by the manufacturer of the complete product.
8. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.
9. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.
10. **Isolation Check**
    (Safety for Electrical Shock Hazard)
    After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs,metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
    (1) **Dielectric Strength Test**
    The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 1100V AC (r.m.s.) for a period of one second.
    (. . . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)
    This method of test requires a test equipment not generally found in the service trade.
    (2) **Leakage Current Check**
    Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).
    • Alternate Check Method
    Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.35V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).



11. **High voltage hold down circuit check.**
    After repair of the high voltage hold down circuit, this circuit shall be checked to operate correctly.
    See item **"How to check the high voltage hold down circuit"**.

FEATURES

- New chassis design enables use of a main board with simplified circuitry.
- Comb filter improves picture quality.
- MASTER COMMAND Ai remote control with multi-color on-screen "Menu" display, allowing interactive, total TV operation.
- Provided with miniature tuner (TV / CATV)
- Full-square CRT (cathode ray tube) reproduces fine textured picture in every detail.
- PLL synthesizer system TV / CATV totaling 180 channels.
- Provided with P.I.P (picture in picture) circuit. . . . . .
  Two screens (one large & one small) can be displayed at the same time.
- The AV input terminal, sound input, external speaker output terminal, and audio output terminal allow for a variety of connections to another AV equipment.
- S-VIDEO input terminal for taking best advantage of Super VHS.
- Variable audio output terminal.
- Built-in TRANSMITTER, MTS & SURROUND circuit with A/V system.
- Infrared cordless stereo headphone (receiver) system for taking best advantage of the stereo sound. . . . . .
  Also listen to the sound of the P.I.P picture. In this way, 2 people can enjoy different picture at the same time.

SPECIFIC SERVICE INSTRUCTIONS

DISASSEMBLY PROCEDURE

REMOVING THE REAR COVER

1. Unplug the power supply cord and remove the fifteen screws marked Ⓐ as shown in Fig. A.

* When reinstalling the rear cover, carefully push it inward after inserting the chassis into the rear cover groove.

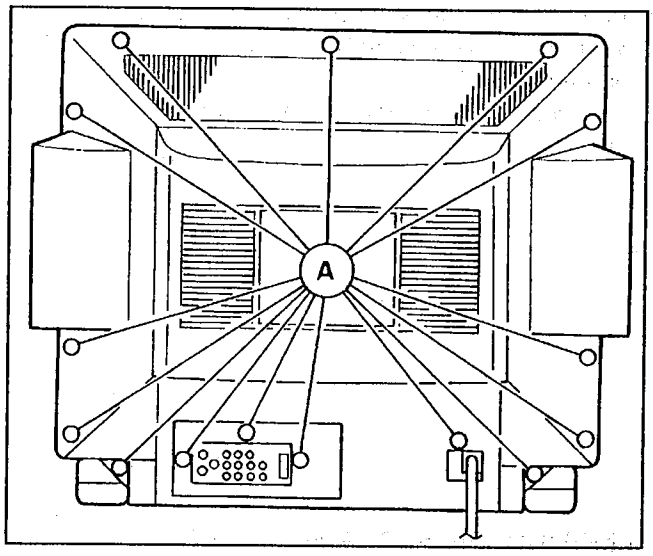


Fig. A

REMOVING THE CHASSIS

* After removing the rear cover.

1. Remove the two screws marked Ⓐ as shown in Fig. B.
2. Loosen the one screw of the front control base marked Ⓐ as shown in Fig. C.
3. As shown in Fig. C, slide and pull out the chassis in the direction of arrow. (If necessary, take off the wire clamp and connectors..,etc.)

* When conducting a check with power supplied, be sure to confirm that the CRT earth wire is connected to the CRT SOCKET PWB and the MAIN PWB.

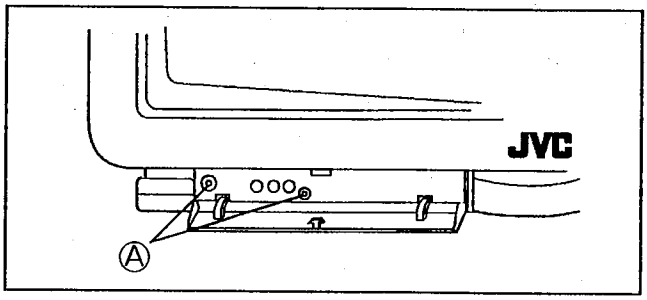


Fig. B

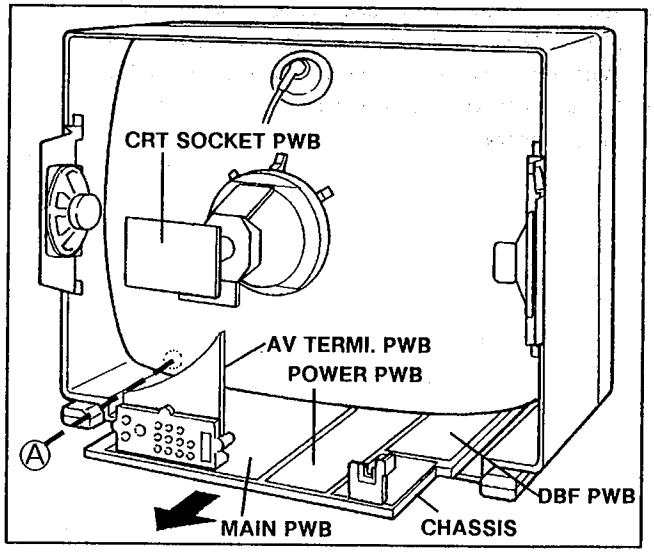


Fig. C

REMOVING THE BASE OF F. AV IN PWB

* After removing the chassis.

1. Remove the claw marked Ⓐ by widening slightly in the direction of arrow in Fig. D.
2. Remove the claw marked Ⓑ by widening in the same way.
3. Remove the BASE of F. AV IN PWB in the direction of arrow Ⓒ by keeping claws Ⓐ and Ⓑ released.

• Claws Ⓐ and Ⓑ may break if widening excessively. Take a full care when widening.

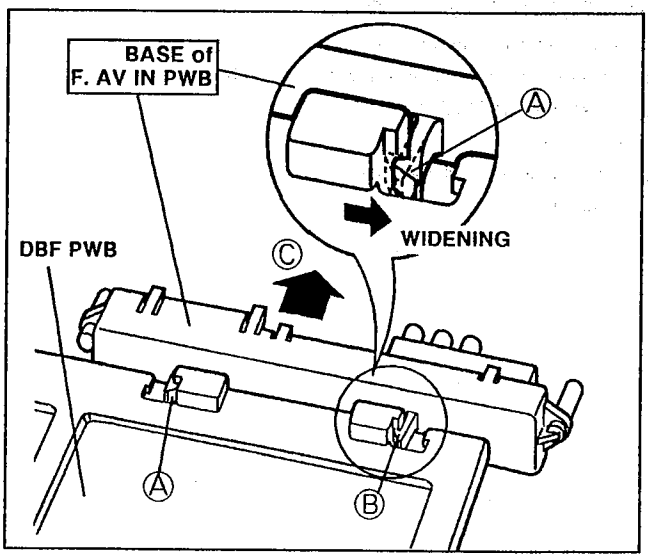


Fig. D

REMOVING THE SPEAKER GRILL

* After removing the rear cover.

1. Remove the two screws marked Ⓐ as shown in Fig. E.
2. While widening the claw marked Ⓑ, remove the speaker grill as shown in Fig. E.
3. Use same procedure when removing the other hand speaker grill.

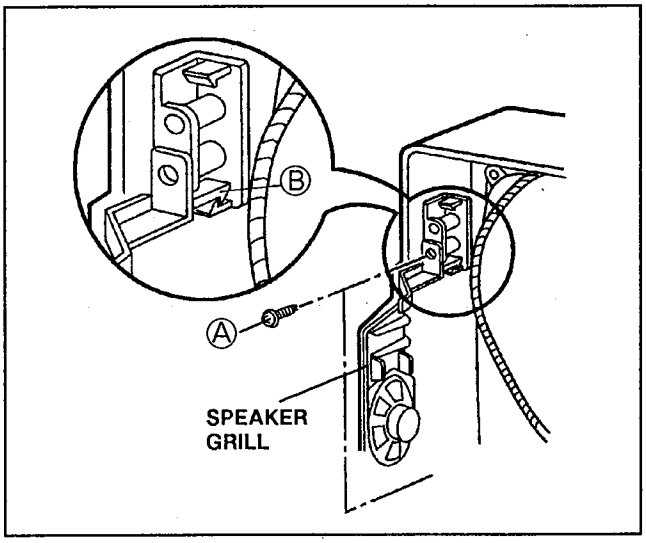


Fig. E

REMOVING THE AV TERMINAL PWB

* After removing the rear cover.

1. Remove the two screws marked Ⓐ as shown in Fig. F.
2. While widening the claws marked Ⓑ, raise the AV TERMINAL PWB in the arrow direction marked Ⓒ as shown in Fig. F.
3. The connector will then be free and the AV TERMINAL PWB can be removed.

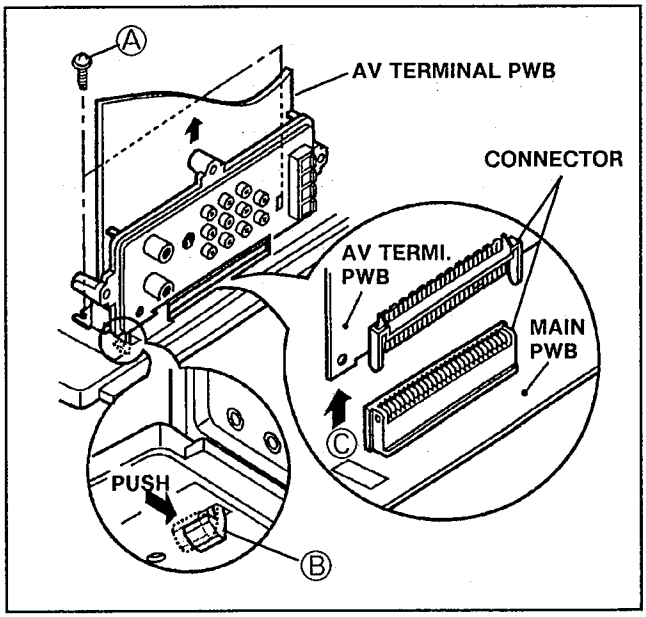


Fig. F

REMOVING THE PIP PWB

* After removing the rear cover.

1. While widening the claws marked Ⓐ as shown in Fig. G.
2. Raise the PIP PWB in the arrow direction marked Ⓑ as shown in Fig. G.
3. The connector will then be free and the PIP PWB can be removed.

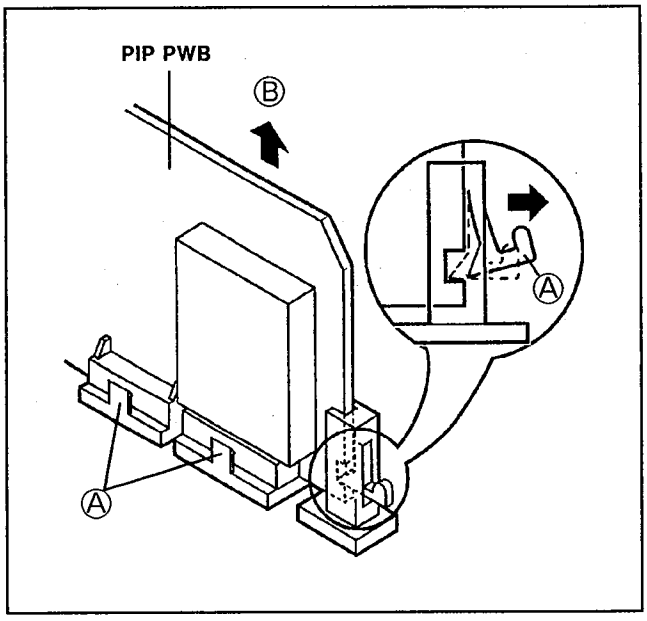


Fig. G

AN EXAMPLE OF PLACEMENT FOR SERVICE

1. As shown in Fig. H, place the unit for service.
2. When the chassis, sub PWB Ass'y etc, have been removed, the wire clamp, connector, earth wire etc, which were also detached together must be reattached to their original places in order to make preparations for service.
3. While taking care that there is no short circuit with the conductor section etc., place the unit.
   Insulate the unit with a cardbord, or the like, if necessary.
4. After making sure that there is no short circuit and other obstructive matters with the unit turn on electricity for service.

* When conducting a check with power supplied, be sure to confirm that the CRT earth wire is connected to the CRT SOCKET PWB Ass'y and the MAIN PWB Ass'y.

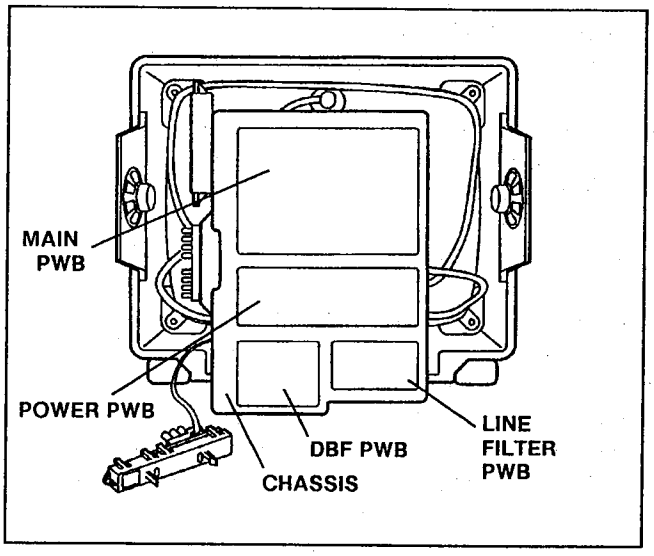


Fig. H

WIRE CLAMPING AND CABLE TIES

1. Be sure to clamp the wire.
2. Never remove the cable tie used for tying the wires together. Should it be inadvertently removed, be sure to tie the wires with a new cable tie.

REMOVING THE VM PWB

* Before conducting the following procedures, remove the CRT SOCKET PWB Ass'y from the neck of the PICTURE TUBE.

1. Remove the two screws which have fixed the VM PWB Ass'y with the holder. (Fig. I)
2. After removing the soldered pole wire which is pulling out from the holder, detach the VM PWB Ass'y.

Note ; Extream care should be taken when removing the soldered pole wire from the PWB Ass'y

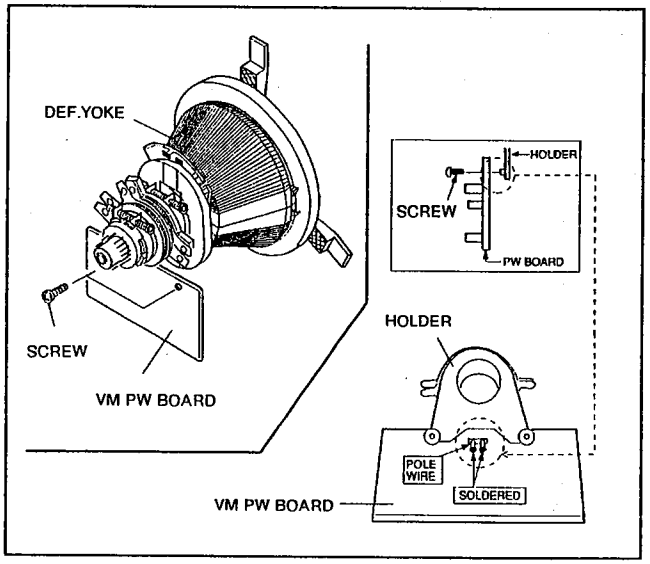


Fig. I

REMOVING THE CRT.

* Relacement of the CRT should be performed by two or more persons.

● After removing the rear cover, chassis and SP grill ass'y etc..,

1. Putting the CRT change table on soft cloth, the CRT change table should also be covered with such soft cloth. (shown in Fig. J)
2. While keeping the surface of CRT down, mount the TV set on the CRT change table balanced will.
3. Remove four nuts marked by arrows with a box type screw driver as shown in Fig.K.

● Since the cabinet will drop when nuts have been removed, be sure to support the cabinet with hands.

4. After four nuts have been removed, put the cabinet slowly on cloth (At this time, be carefully so as not to damage the front surface of the cabinet) shown in Fig.L.

● The CRT should be assembled according to the opposite sequence of its dismounting steps.

* The CRT change table should preferably be smaller than the CRT surface, and its height be about 35cm.

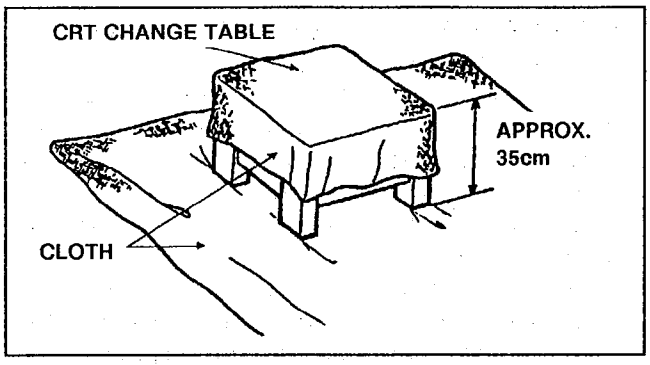


Fig. J

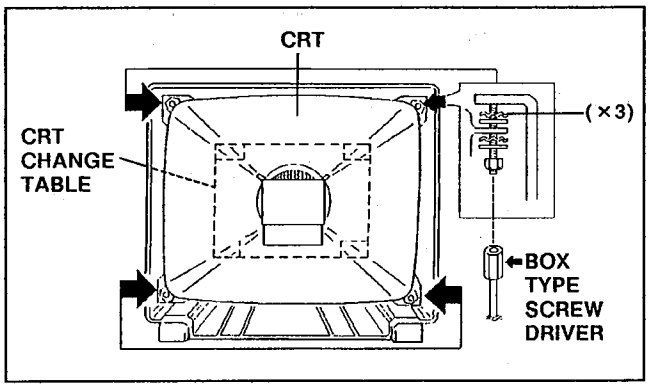


Fig. K

COATING OF SILICON GREASE FOR ELECTRICAL INSULATION ON THE CRT ANODE CAP SECTION

● Subsequent to replacement of the CRT and HV transformer or repair of the anode cap, etc. by dismounting them, be sure to coat silicon grease for electrical insulation as shown in Fig. M. Wipe around the anode button with crean and dry cloth. (Fig. M)

Coat silicon grease on the section around the anode button . At this time, take care so that any silicon grease does not stick to the anode button. (Fig. N)

★ **Silicon grease product No.: KS - 650N**

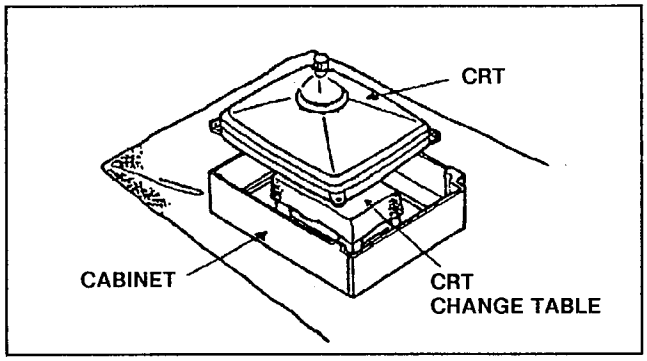


Fig. L

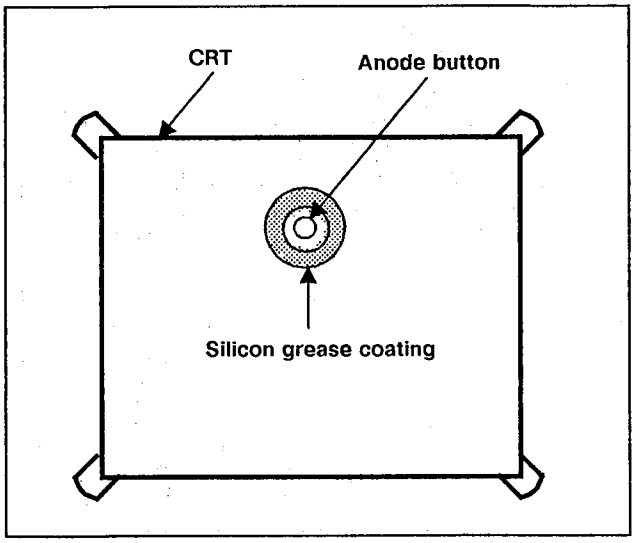


Fig. M

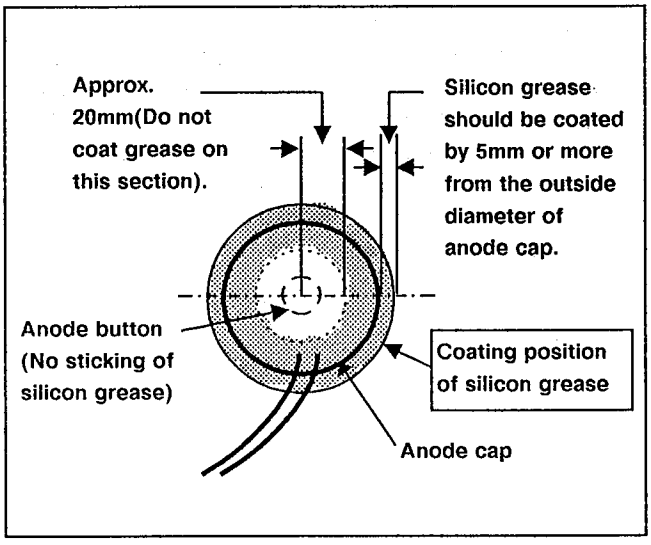


Fig. N

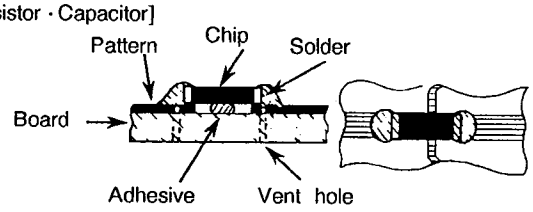
REPLACEMENT OF CHIP COMPONENTS

- **CHIPS ARE NOT USED ON CERTAIN MODELS. REFER TO THE DESCRIPTIONS ON THIS PAGE ONLY WHEN WORKING ON MODELS ON WHICH CHIPS ARE EMPLOYED.**

Replacement of the chip on printed circuit board can be performed easily as follows.

1 **When mounted**

[Resistor · Capacitor]

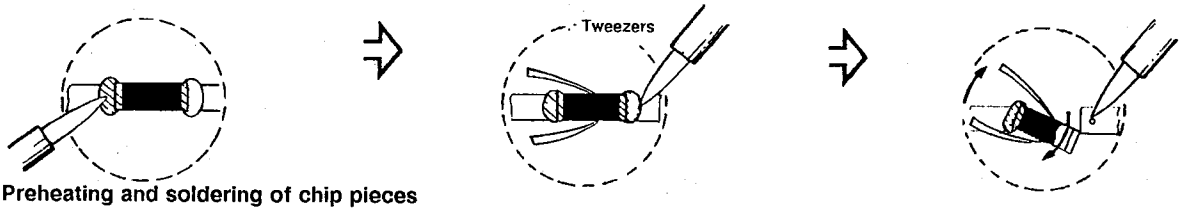


2 **Removal of the chip**

(1) Remove either of the soldered contacts.

(2) Hold the chip with tweezers and remove the other contact.

(3) Work the chip free from the adhesive with tweezers.

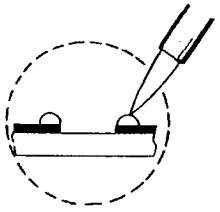


3 **Preheating and soldering of chip pieces**

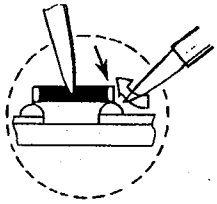
Be sure to preheat chip pieces (except the transistor) especially the capacitor before soldering with hot air, about 150°C (hair dryer or such can be used) for about 2 minutes. Then, immediately solder with an iron of about 30W.

4 **Replacing the chip pieces**

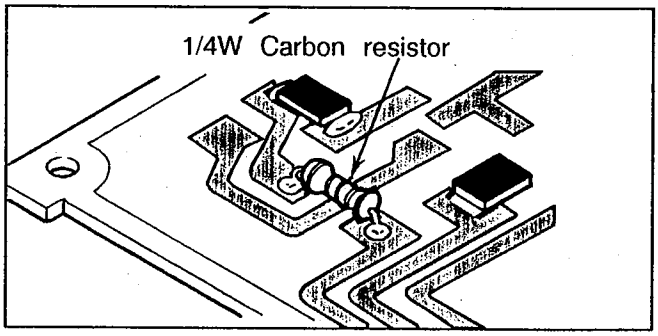
(1) Apply the solder to the board first.



(2) Hold the chip with tweezers and solder it in place, hold the iron at a 45° angle when soldering.

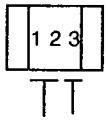


- Discrete parts can be substitutionally mounted as shown in the figure on the right.
  Mounting is also possible by passing the wires from the board front side (parts side) through the chip soldering hole (vent hole of registration part).
  Substitute parts are as follows.
  - Chip Metal Glaze Resistor
    →Carbon Resistor 1/4W ±5%
  - Chip Ceramic Capacitor
    →Ceramic Capacitor 50V ±5%



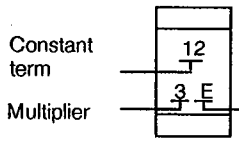
- Decoding of chip parts constant terms

<Chip Metal Glaze Resistor>



Constant term: 12
Multiplier: 3
12×10^3 = 12000Ω = 12kΩ

<Chip Ceramic Capacitor>



K, M, Z, P · · · · · Tolerance of ordinary type

C, P, R, S, T, U · · Temperature coefficient of temperature compensation type

12×10^3 = 12000pF = 0.012μF

SERVICE ADJUSTMENTS

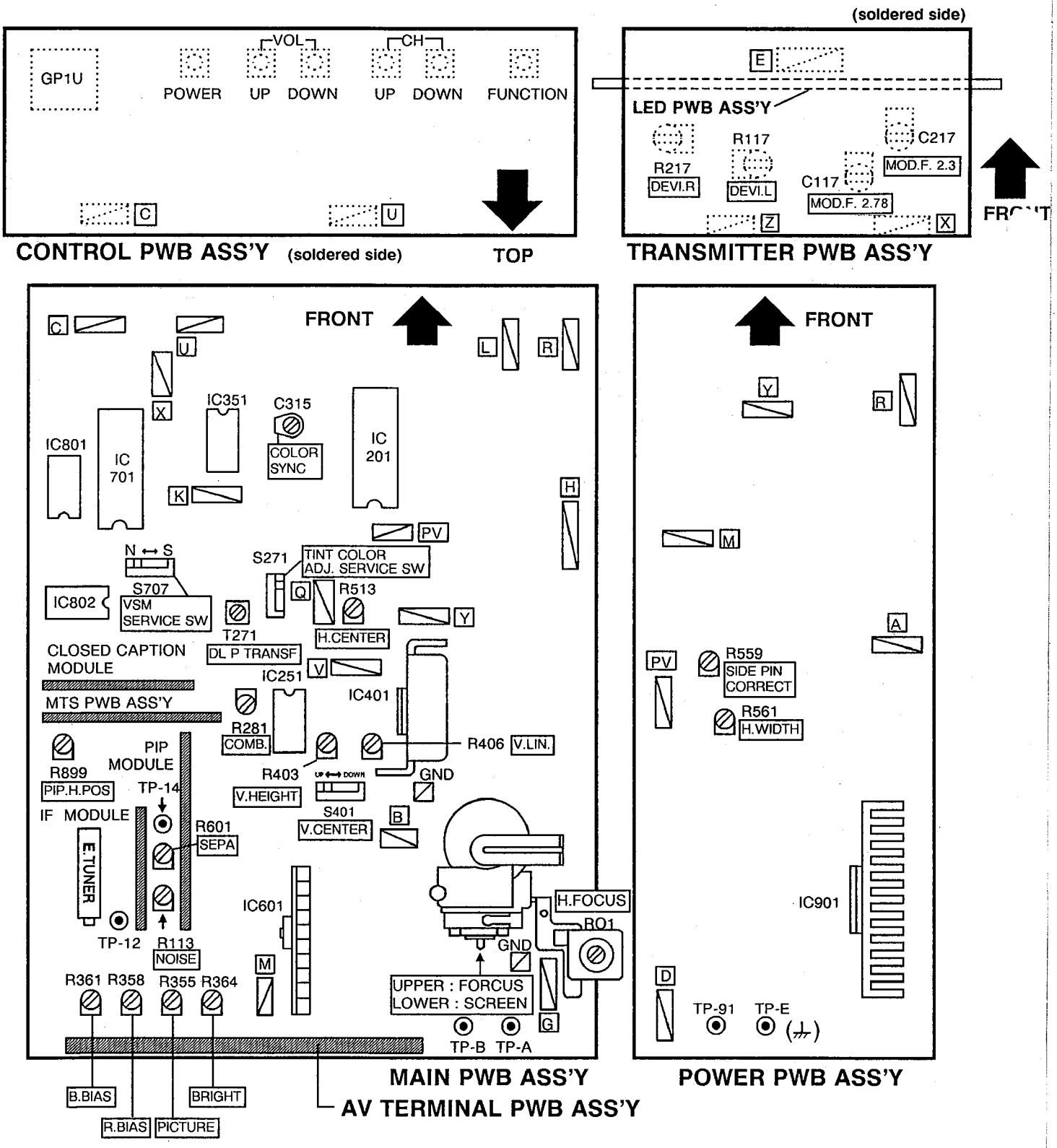
TOOLS AND FIXTURES FOR ADJUSTMENT

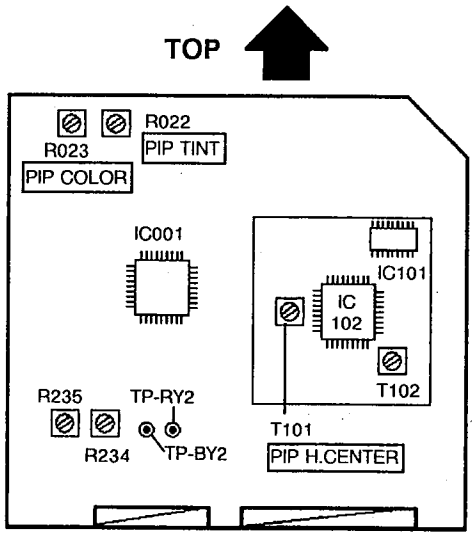
- DC VOLTMETER
- TV MULTI. CHANNEL SOUND GENERATOR.
- OSCILLOSCOPE
- PATTERN GENERATOR (NTSC)

PREPARATION BEFORE ADJUSTMENT

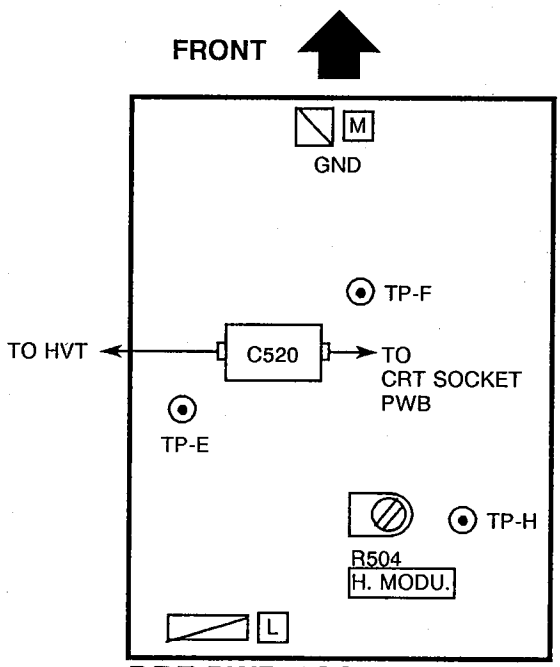
- Set the BRIGHT, PICTURE, COLOR, TINT, etc. to the standard settings.

ADJUSTMENT LOCATION

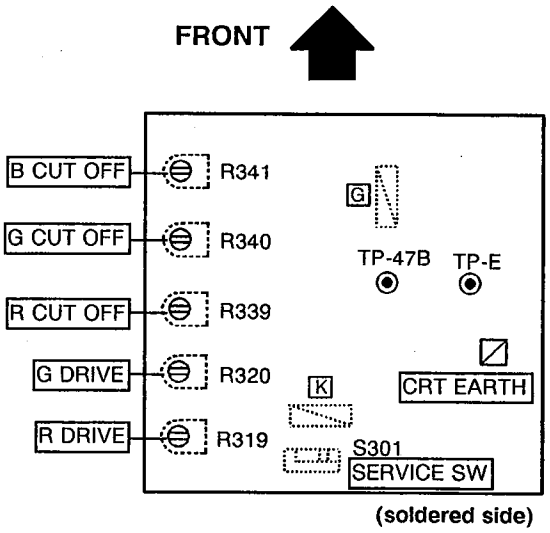




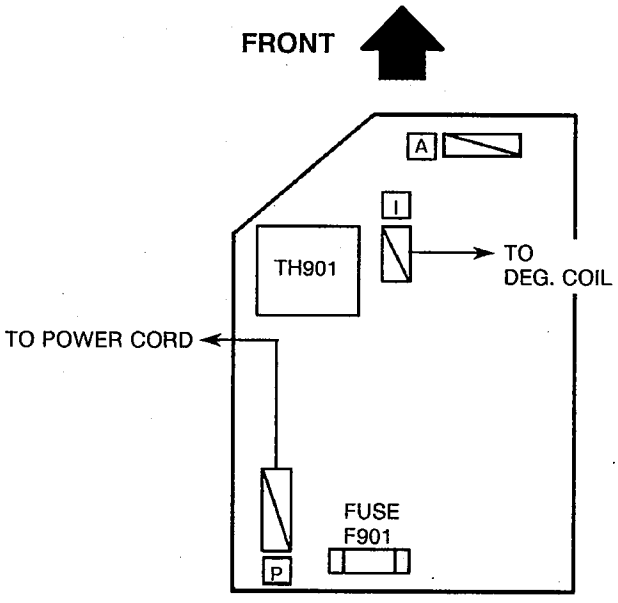
PIP MODULE PWB ASS'Y



DBF PWB ASS'Y

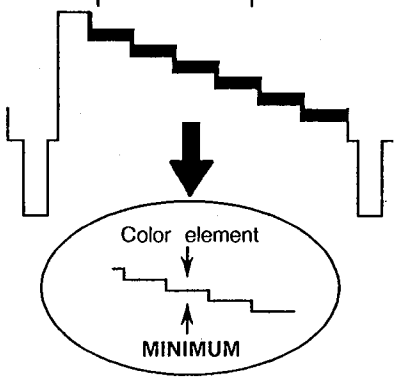


CRT SOCKET PWB ASS'Y



LINE FILTER PWB ASS'Y

ADJUSTMENT

Item	Measuring instrument	Test point	Adjustment part	Description
POWER CIRCUIT				
B1 POWER SUPPLY	DC VOLTE-METER	TP-91 TP-E (⏚)		1. Confirm that the voltage between TP-91 and TP-E (⏚) is DC 120.5V ± 1.5V.
MAIN CIRCUIT				
NOISE (RF. AGC)			NOISE VR (R113)	1. Adjust the NOISE VR so that the noise appears in the picture. 2. Next turn the NOISE VR in a direction that the noise disappears from the picture and stop at the point where the noise has disappeared from the picture. 3. Turn to another channel and confirm that there are no abnormal ities.
COLOR SYNC.	PATTERN GENERATOR	IC201 Pin ㉟ } Pin ㊶ Pin ㉝	COLOR SYNC. (C315)	1. Receive the color bar signal. 2. Connect pins ㉟ and ㉝ of IC201 to pin ㊶ (+ 9V). 3. Adjust the COLOR SYNCHRONIZATION to obtain color synchronization. 4. Remove the connections and check that the color synchronization does not deteriorate on any of the channels.
COMB FILTER	PATTERN GENERATOR	IC251 PIN ⑫ 	DL P TRANSF. (T271) COMB FILTER VR (R281)	1. Receive the color bar signal. 2. Connect the oscilloscope to pin ⑫ of IC251. Magnify the chrome signal portions of the color bar waveform so that the 3.58 MHz elements become easy to observe. 3. Adjust DL P Transf. , and minimize the 3.58MHz elements. 4. Regulate the COMB FILTER adjustment VR to further minimize the 3.58MHz elements. 5. Repeat steps 3 and 4 to fully minimize the 3.58MHz elements.
V. CENTER	PATTERN GENERATOR		V. CENTER SW (S401)	• The screen can be shifted vertically by changing the V. CENTER switch.
V. HEIGHT & V. LIN.	PATTERN GENERATOR		V. HEIGHT VR (R403) V. LIN. VR (R406)	1. Receive a picture that enable vertical symmetry to be checked. 2. Reduce the vertical size with the V. HEIGHT VR. 3. Adjust the vertical symmetry with the V. LINEARITY VR. 4. Readjust the V. HEIGHT VR so that the picture extends to normal size.
H.CENTER			H. CENTER VR (R513)	1. Observe the picture and adjust the H. CENTER VR control for equal horizontal position left and right.

Item	Measuring instrument	Test point	Adjustment part	Description

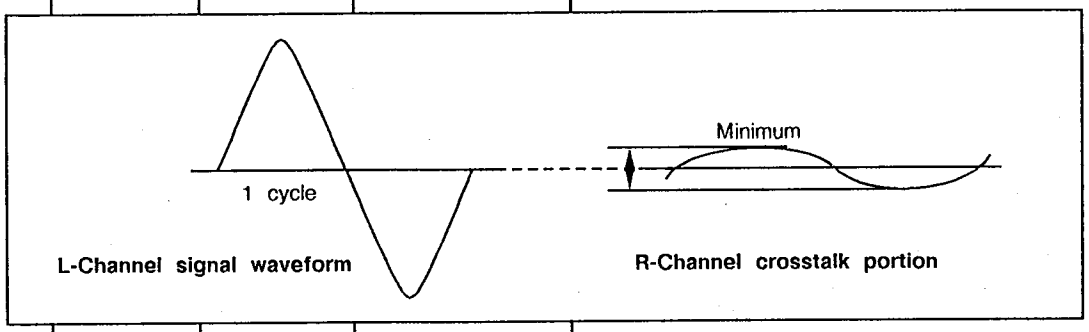
MAIN CIRCUIT

SUB BRIGHT	Remote control unit		VSM SERVICE SW (S707)	1. By pressing AV STATUS / RESET button of the remote control unit, reset the respective functions (TINT, COLOR, PICTURE, BRIGHT & DETAIL) 2. Turn VSM SERVICE SW to the S side. 3. Press FUNCTION KEY (+/- key or ▽/△ key) . 4. Select BR(BRIGHT) adjustment mode using FUNCTION KEY of the remote control unit and obtain an optimum brightness using the adjusting (+/-) key of FUNCTION. 5. Select THEATER MODE using AV STATUS / RESET key of the remote control unit. 6. Select BR (BRIGHT) adjustment mode using FUNCTION KEY (▽/△) of the remote control unit. 7. Adjust to slightly more bright than NORMAL MODE using FUNCTION KEY (+/-) of the remote control unit. 8. After adjustment , return VSM SERVICE SW to the N side. • Avoid excessive brightness.
PICTURE	Remote control unit		VSM SERVICE SW (S707)	1. By pressing AV STATUS / RESET button of the remote control unit, reset the respective functions (TINT, COLOR, PICTURE, BRIGHT & DETAIL) 2. Turn VSM SERVICE SW to the S side. 3. Press FUNCTION KEY (+/- key or ▽/△ key) . 4. Select PI(PICTURE) adjustment mode using FUNCTION (▽/△) KEY of the remote control unit and obtain an optimum picture using the adjusting (+/-) key of FUNCTION. 5. Select THEATER MODE using AV STATUS / RESET KEY. 6. Select PI (PICTURE) adjustment mode using FUNCTION KEY (▽/△) of the remote control unit. 7. Adjust to slightly less bright (To reduce the contrast) than PI (PICTURE) of NORMAL MODE using FUNCTION KEY (+/-) of the remote control unit. 8. After adjustment , return VSM SERVICE SW to the N side.
TINT &COLOR	Remote control unit		VSM SERVICE SW (S707) TINT / COLOR ADJUST SERVICE SW (S271)	1. By pressing AV STATUS / RESET button of the remote control unit, reset the respective functions (TINT, COLOR, PICTURE, BRIGHT & DETAIL) 2. Turn TINT, COLOR, ADJ. SERVICE SW to the S side and set the NOTCH ON with remote control. 3. Turn VSM SERVICE SW to the S side. 4. Press FUNCTION KEY (+/- key or ▽/△ key) . 5. Select the TINT and COLOR controls with the remote control unit function keys. Use the (+/-) keys of FUNCTION to adjust for the most natural color. 6. Select THEATER MODE using AV STATUS / RESET KEY. 7. Select TI (TINT) or CO (COLOR) adjustment mode using FUNCTION KEY (▽/△) of the remote control unit. 8. Adjust to the same setting of TI (TINT) or CO (COLOR) as NORMAL MODE using FUNCTION KEY (+/-) of the remote control unit. 9. After adjustment , return VSM SERVICE SW and TINT, COLOR ADJ SERVICE SW to the N side and retern the NOTCH OFF with remote control.

Item	Measuring instrument	Test point	Adjustment part	Description

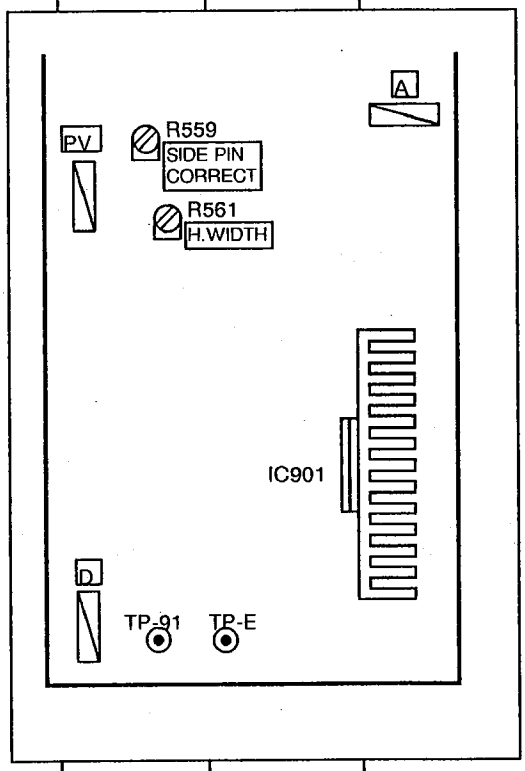
MAIN CIRCUIT

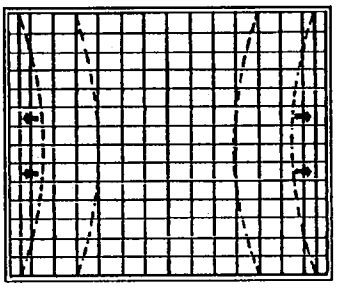
SEPARATION	TV MULTI-CHANNEL SOUND GENERATOR	AUDIO OUTPUT L&R	SEPARATION VR (R601)	1. Set the TV multichannel sound signal generator for generating stereo signal and output signal of about 3KHz from the left channel. 2. Connect an oscilloscope to the " L" output and obtain a clear view of 1- cycle portion of 3KHz waveforms. 3. Change connection of the oscilloscope to the "R" output and expand the voltage axis. 4. Adjust the SEPARATION VR and minimize the 3KHz crosstalk portion.



POWER CIRCUIT

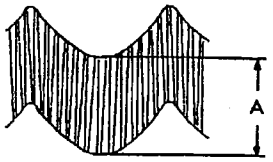
H.WIDTH & SIDE PIN CORREC-TION	PATTERN GENERA-TOR		H.WIDTH VR (R561) SIDE PIN CORRECTION VR (R559)	1. Set the H.WIDTH VR to mechanical center. 2. Display the picture to the crosshatch pattan. 3. Adjust the SIDE PIN CORRECTION VR so that the V.LIN. of the crosshatch patten becomes a straight line. 4. Then adjuist the H.WIDTH VR and correct the picture - missing condition to the normal status. * This adjustment is conducted when characters or others to be displayed art screen corners are not appearing on the screen.



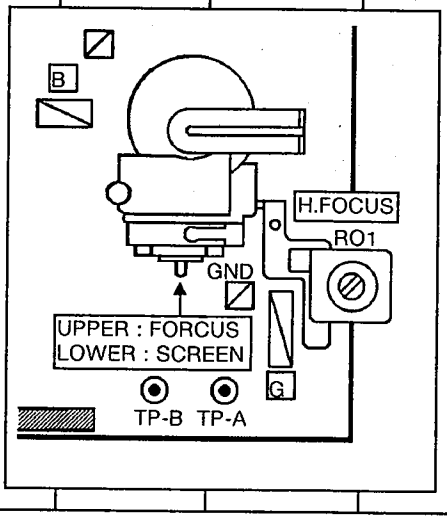


Item	Measuring instrument	Test point	Adjustment part	Description

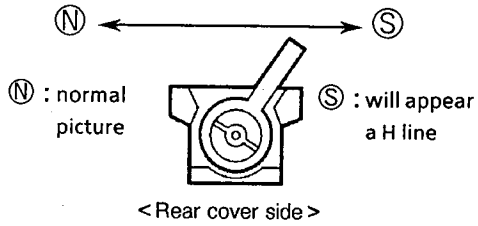
DBF CIRCUIT

DBF MODULATION	OSILLO-SCOPE	TP - F TP - E	H. MODULATION VR (R504)	1. Receive a black-and-white signal. 2. Connect an oscilloscope to the TP - F and TP - E (⏚). 3. Adjust the H. MODULATION VR so that the value A becomes 500V (±20V). 

FOCUS / H. FOCUS

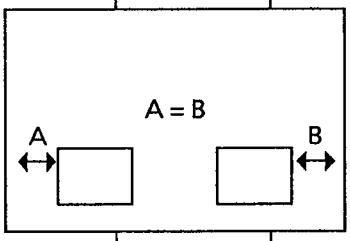
FOCUS & H. FOCUS	PATTERN GENERA-TOR		FOCUS VR (with in HVT) H. FOCUS VR (R01) [POWER PWB]	1. Position the H.FOCUS VR roughly to the center in advance. 2. Display the picture to the crosshatch pattern. 3. While watching the screen,turn the FOCUS adjusting VR,and adjust the focus so that the horizontal lines at the center position of crosshatch pattern become finest and clearest. 4. Next,adjust the focus with the H. FOCUS VR so that the vertical lines become optimal. * However,the center focus and surrounding focus should be balanced adequately. 5. Repeat the above steps twice through four times as necessary. * Be sure to perform final adjustment of convergence after adjustment of focus.

CRT SOCKET CIRCUIT

HORIZON-TAL LINE			SERVICE SW (S301) [CRT SOCKET PWB]	1. Turning the SERVICE SWITCH from the N side to the S side will bring the horizontal line display to the screen. 

MTS CIRCUIT

Do not touch the VRs inside the MTS PWB ASS'Y.

Item	Measuring instrument	Test point	Adjustment part	Description
PIP CIRCUIT				
PIP BRIGHT & PIP PICTURE			PIP BRIGHT VR (R364) PIP PICTURE VR (R355) [MAIN PWB]	1. Make the picture PIP. 2. Obtain optimum pictures equivalent to the pictures displayed in the main screen by adjusting PIP BRIGHT VR and PIP PICTURE VR. * Avoid excessive brightness.
PIP WHITE BALANCE	PATTERN GENERA-TOR		PIP B BIAS VR (R361) PIP R BIAS VR (R358) [MAIN PWB]	1. Receive a white signal. 2. Display white over the PIP screen. 3. Adjust PIP B BIAS VR and PIP R BIAS VR until the PIP screen becomes white entirely. * Do not touch the WHITE BALANCE VRs (R234, R235) inside the PIP MODULE PW BOARD ASS'Y.
PIP H. POSITION			PIP H. POSITION VR (R899) [MAIN PWB]	1. Make the picture PIP. 2. Adjust the PIP H. POSITION VR until A and B as shown in the Fig. become uniform when the PIP screen is shifted in the right and left directions by means of the remote control.
PIP COLOR & TINT			PIP COLOR VR (R023) PIP TINT VR (R022) [PIP MODULE PWB]	1. Make the picture PIP. 2. Obtain optimum pictures equivalent to the pictures displayed in the main screen by adjusting PIP COLOR VR and PIP TINT VR.
PIP H CENTER			PIP H CENTER (T101) [PIP MODULE PWB]	1. Make the picture PIP. 2. Observe the picture and adjust the PIP H CENTER transformer control for equal horizontal position left and right.

HOW TO CHECK THE HIGH VOLTAGE HOLD DOWN CIRCUIT

1. HIGH VOLTAGE HOLD DOWN CIRCUIT

After repairing of the high voltage hold down circuit shown in Fig. 1.
This circuit shall be checked to operate correctly.

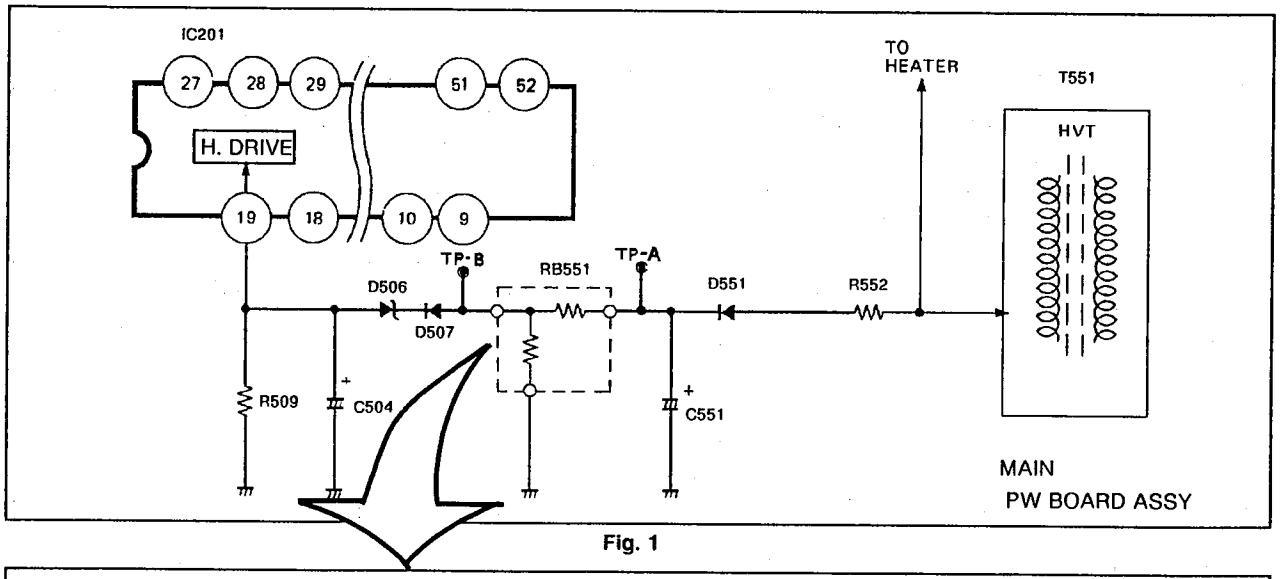


Fig. 1

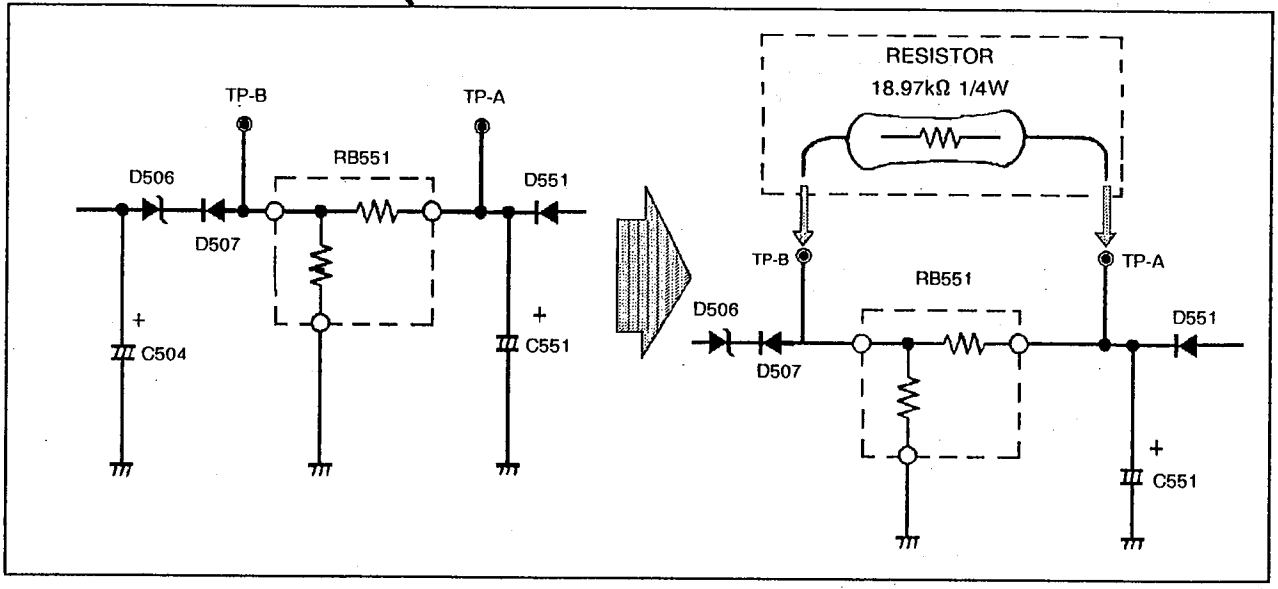


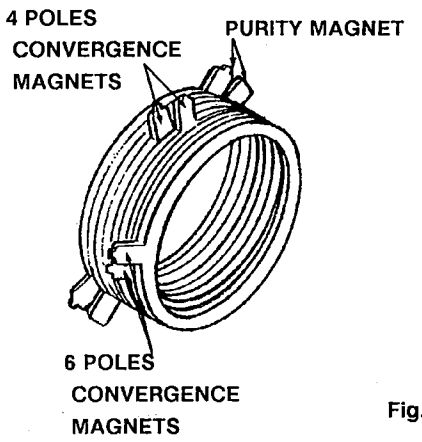
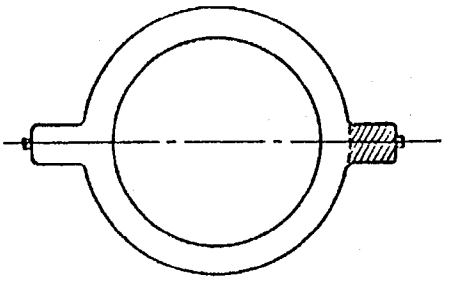
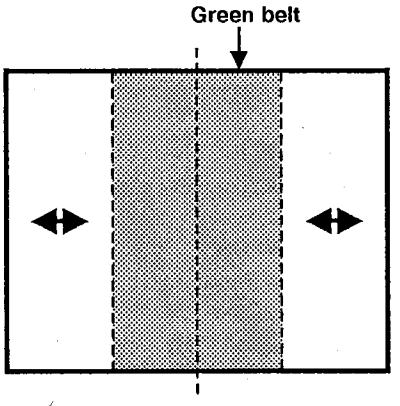
Fig. 2

2. CHECKING OF THE HIGH VOLTAGE HOLD DOWN CIRCUIT.

(1) Make sure that the power SW is at OFF.
(2) As shown in Fig. 2, set the resister 18.97kΩ 1/4W (between TP-A and TP-B).
(3) Turn the power SW ON.
(4) Make sure that the screen picture disappears.
(5) Turn the power SW OFF.
(6) Remove the resistor 18.97kΩ 1/4W from RB551 (between TP-A and TP-B).

PURITY, CONVERGENCE AND WHITE BALANCE

1. ADJUSTMENT OF PURITY

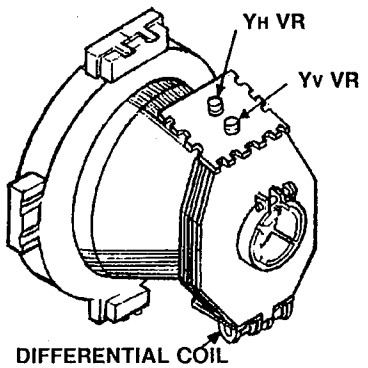
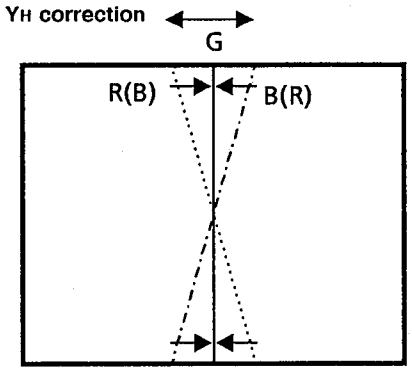
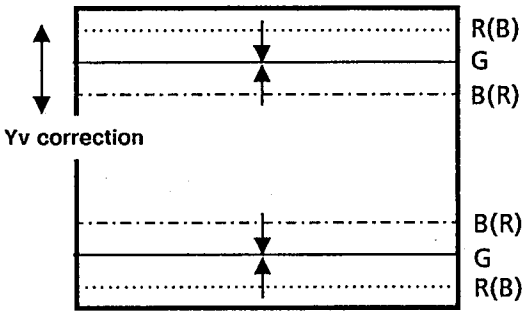
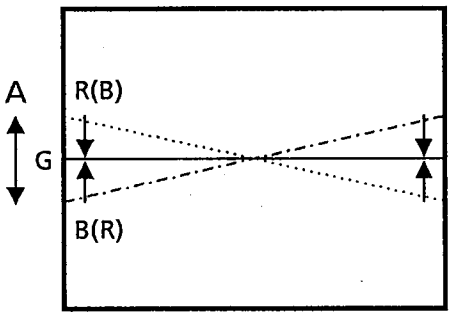
Adjustment Part	Description	Remarks
SERVICE SWITCH WEDGE PURITY MAGNET GREEN CUT-OFF VR RED CUT-OFF VR BLUE CUT-OFF VR SCREEN VR DEF. YOKE	Prior to starting adjustment, perform the following items: 1. Remove a wedge inserted into the DEF. yoke. At this time, clean the portion from which the wedge has been removed. 2. Peel adhesive used to fix six magnets with a tip of screw driver so that the magnets can be turned freely. 3. Let the monochrome screen appear. 4. Demagnetize the CRT with a demagnetizer. 5. Set the brightness and picture to slightly higher than the standard values, and warm up for about 20 ~ 30 minutes. Adjustment method 1. By turning the GREEN CUT - OFF VR fully to the right side and the RED · BLUE CUT - OFF VR fully to the left side, adjust the screen with the SCREEN VR to make the green picture visible. 2. After loosening the set screw of the DEF. YOKE, draw the yoke fully to the rear side to let irregular color of a vertical belt form appear on the screen. 3. Mutually pile up two PURITY MAGNETS, and set them to a horizontal position as initial magnets (Fig. 2). 4. While opening and closing or turning the claws of PURITY MAGNETS, let green vertical belts appear on the center of the screen (Fig. 3).	 Fig. 1 **Align two purity magnets horizontally.**  Fig. 2  **Shift the green belt to the center** Fig. 3

Adjustment Part	Description	Remarks
	5. Push out the DEF. YOKE to the front side, and set the position of the DEF. YOKE so that the entire screen becomes totally green (Fix the DEF. YOKE temporarily with a WEDGE so that the yoke is not moved). 6. Next, let HORIZONTAL LINE appear. With the DEF. YOKE, make the line horizontal and let the line be further closer to the vertical center position (In this case, do not change the front and rear positions of the DEF. yoke) (Figs. 4 and 5). 7. By selecting the SERVICE SWITCH to N from S, let the initial picture appear on the screen. 8. Make sure that the purity has been obtained regarding the red, blue and mono-color raster. 9. Lightly tighten the set screws so that the DEF. YOKE is not moved back and forth. 10. Insert the removed WEDGE into the initial position and fix it. 11. Firmly tighten the set screws of the DEF. YOKE with an appropriate torque.	When the service switch is set to N Raster screen N S SERVICE SWITCH Horizontal line When the service switch is set to S Fig. 4 Horizontal line Position of vertical center (There are two small white marks) Let the horizontal line approach between the white marks at the portion denoted by . Fig. 5

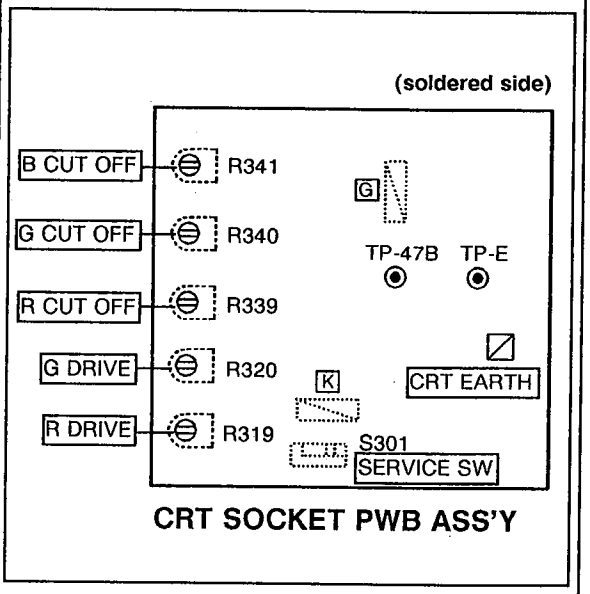
2. ADJUSTMENT OF STATIC (CENTER) CONVERGENCE

Adjustment Part	Description	Remarks
CONVERGENCE MAGNET	Adjustment method 1. Try to receive cross-hatch pattern. 2. With the 4-POLE CONVERGENCE MAGNETS, overlap the red and blue lines at the center of the screen and turn the color to Magente (red/blue). 3. Next, overlap magenta (red/blue) and green lines at the center of the screen using the 6-POLE CONVERGENCE MAGNETS. 4. By repeating the Steps 2 and 3 above, align the convergence of vertical line to that of the horizontal line at the center of the screen.	Open two handles. Turn the handles altogether while keeping them at a specific angle. Fig. 6

3. ADJUSTMENT OF DYNAMIC CONVERGENCE

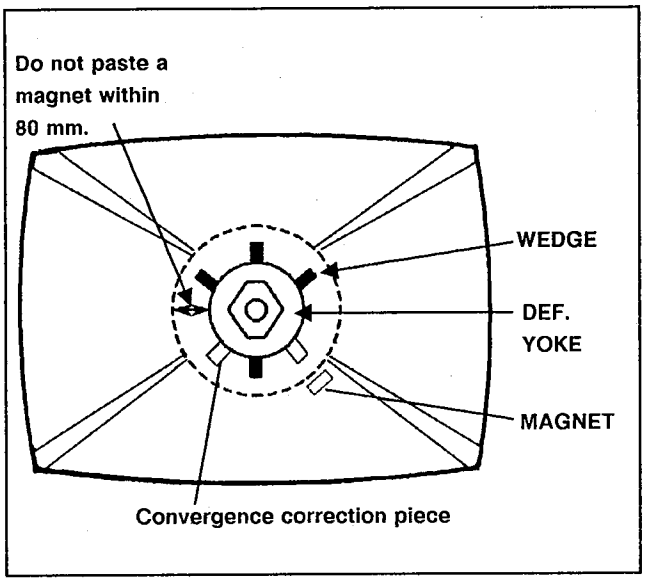
Adjustment Part	Description	Remarks
Y_H VR Yv VR DIFFERENTIAL COIL	● Adjust the dynamic convergence by means of the YH VR, Yv VR and DIFFERENTIAL COIL. This adjustment should not be performed by oscillation of the DEF. yoke.	 Fig. 7
	Adjustment method 1. Align the displacement of the red and blue vertical lines by adjustment with the YH VR (Figs. 7 and 8).	 Fig. 8
	2. Align the displacement of red and blue in Fig.9 by adjustment with the Yv VR (Figs. 7 and 9).	 Fig. 9
	3. Align the displacement of red and blue in the section A by adjustment with the DIFFERENTIAL COIL(Figs. 7 and 10).	 Fig. 10
	● After completing adjustment of the purity and convergence, fix the six magnets using adhesive.	

4. ADJUSTMENT OF WHITE BALANCE

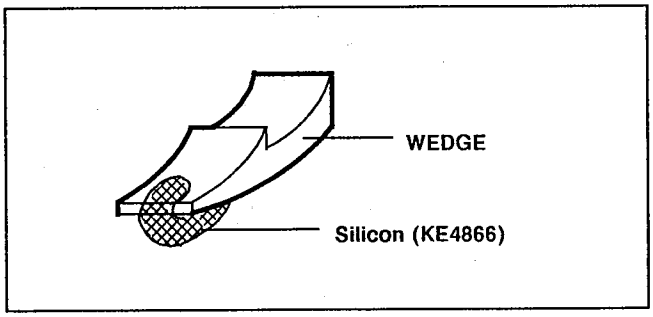
Adjustment Part	Description	Remarks
SERVICE SWITCH CUT - OFF VR DRIVE VR	1. Let monochrome screen appear. 2. Let HORIZONTAL LINE appear on the screen. 3. Turn the RED, GREEN AND BLUE CUT - OFF VRs fully to the left side. 4. Position the RED AND GREEN DRIVE VRs roughly to the center. 5. Turn the SCREEN VR to let either of the red, green and blue horizontal lines appear slightly on the screen. 6. Turn the CUT - OFF VR of the color appeared first about 10° to the right side. Adjust the SCREEN VR again to let this color slightly appear. 7. With the CUT - OFF VRs for the other two colors, adjust the intensity of the two colors to the same intensity of the horizontal line appeared in the step 6 so that the horizontal line will slightly light where the three colors are at a same level. 8. Change over the SERVICE SWITCH to restore the screen to an initial one. 9. After making the screen a little bit dark, perform fine adjustment of the CUT OFF VRs (R, G and B) to obtain the best monochrome screen. After turning the screen to bright next, adjust the screen with the RED OR GREEN DRIVE VR to obtain the best monochrome screen.	 CRT SOCKET PWB ASS'Y

PURITY · CONVERGENCE
Precautions for Adjustment

1. Should it be unavoidable to use a magnet to correct the purity, the magnet to be pasted should be separated by more than 80 mm from the DEF. yoke (If the magnet is made closer to the DEF. yoke, distortion will appear on the screen).
2. As shown in Fig, on the right side, attach the wedges for fixing the DEF. YOKE.
   Moreover, apply silicon (KE4866) on the tips of the wedges. In this case, be sure not to apply it beside the tips.
3. In principle, any convergence correction piece should not be used. If unavoidable to do so, use it in a diagonal direction. Moreover, four or more correction pieces should not be used.



Back of CRT



AV-35BH4(US) STANDARD CIRCUIT DIAGRAM

■NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the ⚠ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1)Input signal :Color bar signal
(2)Setting positions of each knob/button and variable resistor :Original setting position when shipped
(3)Internal resistance of tester :DC 20kΩ/V
(4)Oscilloscope sweeping time :H ⇒20μS/div
:V ⇒5mS/div
:Others ⇒ Sweeping time is specified
(5)Voltage values :All DC voltage values

* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL[EXAMPLE]

●In the PW board :R1209→R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

●Resistance value
No unit :[Ω]
K :[KΩ]
M :[MΩ]

●Rated allowable power
No indication :1/6[W]
Others :As specified

●Type
No indication :Carbon resistor
OMR :Oxide metal film resistor
MFR :Metal film resistor
MPR :Metal plate resistor
UNFR :Uninflammable resistor
FR :Fusible resistor

* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

●Capacitance value
1or higher :[pF]
less than 1 :[μF]

●Withstand voltage
No indication :DC50[V]
Others :DC withstand voltage[V]
AC indicated :AC withstand voltage[V]

* Electrolytic Capacitors
47/50[Example]:Capacitance value[μF]/withstand voltage[V]

●Type
No indication :Ceramic capacitor
MY :Mylar capacitor
MM :Metalized mylar capacitor
PP :Polypropylene capacitor
MPP :Metalized polypropylene capacitor
MF :Metalized film capacitor
TF :Thin film capacitor
BP :Bipolar electrolytic capacitor
TAN :Tantalum capacitor

(3)Coils

No unit :[μH]
Others :As specified

(4)Power Supply

:B1(120.5V)
:B2(12V)
:9V
:5V

* Respective voltage values are indicated.

(5)Test Point

: Test point
: Only test point display

(6)Connecting method

: Connector
: Wrapping or soldering
: Receptacle

(7)Ground symbol

: LIVE side ground
: NEUTRAL side ground
: EARTH ground
: DIGITAL ground

5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE (primary : ⊥) side GND and the NEUTRAL (secondary : ⏚) side GND. Therefore, care must be taken for the following points.

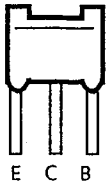
(1) Do not touch the LIVE side GND or the LIVE side GND and the NEUTRAL side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2) Do not short between the LIVE side GND and NEUTRAL side GND or never measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and NEUTRAL side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

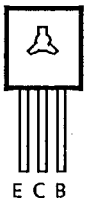
◇ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

SEMICONDUCTOR SHAPES (* = Bottom view)

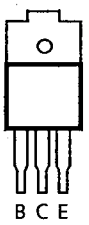
TRANSISTORS



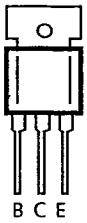
2SC3619
2SC4502-T



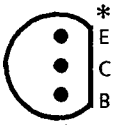
2SC3271(NP)



2SD1408(OY)
2SA1306(Y)
2SC3298(Y)



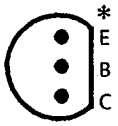
2SC2068-LB
2SD1133(CD)
2SC4256

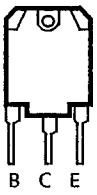


2SC1815(YG)
2SA1015(YG)
2SA966(OY)
2SC2655(Y)
2SC1360

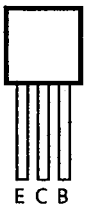
2SC1959(Y)
2SC2878(B)
2SA673(C)
2SB774(RS)
2SC2482(C1)

2SC3811(R)





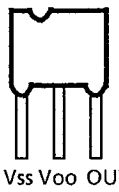
2SC4589-C1
2SD1555-C1



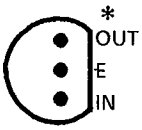
2SA933(QR)
2SA933S(QR)
2SA1309A(QR)
DTC124ES
DTC323TS

2SC2785(JH)
2SC1740S(QR)
2SC1740(QR)
2SC3311A(QR)

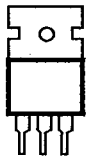
ICs



MN1280-K

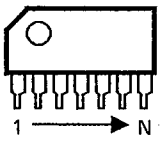


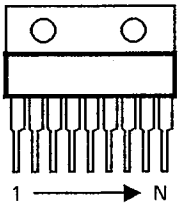
RC78L05A-Y
TA78L005AP
TA78L012AP



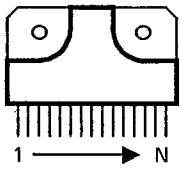
TA78005AP
TA78012AP
AN7805
UPC2412HF
UPC2405HF
TA78L009AP

LA7952

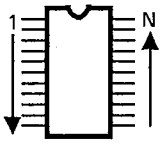




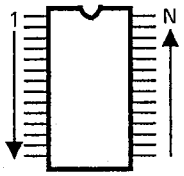
LA4261



TA8216H
MC13516T2

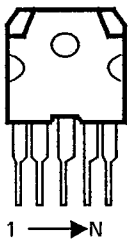


AN5352N
TC4066BP
UPD6326C
VUC2003
MN12C261D
TA7630P

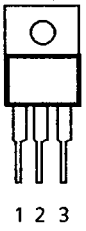


VC2024Z
MN1873221JGJ5
MN1872013JGU4
TA8759AN
TA7825AN
TA8720AN

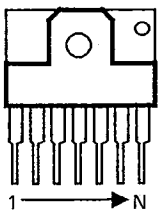
M65109BSP
M51365SP
TA8662N



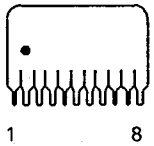
STR30130



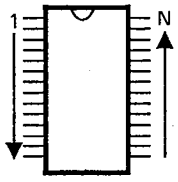
SE120N



LA7838



JCC1002



TDA1029
LM324N
SM5807EP
M51496P
SAA5243P/E
PCF84C81P/064
M37201M6-540SP
TDA3810

TDA1526
M52005P
CXL5005P
FCB61C65-70P
SAA5231
CXA1124BS
M50253P

CHANNEL CHART (US)

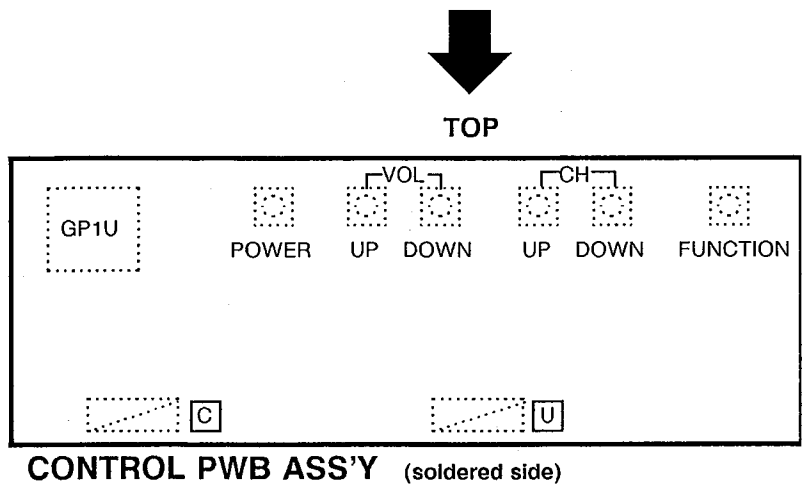
MODE TV	MODE CATV	BAND	CHANNEL REAL	CHANNEL DISP.	TUNER BAND
○	○	VL	02 03 04 05 06		I
		VH	07 08 09 10 11 12 13		II
×	○	MID	A	14	I
			B	15	
			C	16	II
			D	17	
			E	18	
			F	19	
			G	20	
			H	21	
			I	22	
		SUPER	J	23	
			K	24	
			L	25	
			M	26	
			N	27	
			O	28	
			P	29	
			Q	30	
			R	31	
			S	32	
			T	33	
			U	34	
			V	35	
			W	36	
		HYPER	W + 1	37	
			W + 2	38	
			W + 3	39	
			W + 4	40	
			W + 5	41	
			W + 6	42	
			W + 7	43	
			W + 8	44	
			W + 9	45	
			W + 10	46	
			W + 11	47	
			W + 12	48	IV
			W + 13	49	
			W + 14	50	
			W + 15	51	
			W + 16	52	
			W + 17	53	
			W + 18	54	
			W + 19	55	
			W + 20	56	
			W + 21	57	
			W + 22	58	
			W + 23	59	
			W + 24	60	
			W + 25	61	
			W + 26	62	
			W + 27	63	
			W + 28	64	
		ULTRA	W + 29	65	
			W + 30	66	
			W + 31	67	
			W + 32	68	
			W + 33	69	
			W + 34	70	
			W + 35	71	

MODE TV	MODE CATV	BAND	CHANNEL REAL	CHANNEL DISP.	TUNER BAND
×	○	ULTRA	W + 36	72	IV
			W + 37	73	
			W + 38	74	
			W + 39	75	
			W + 40	76	
			W + 41	77	
			W + 42	78	
			W + 43	79	
			W + 44	80	
			W + 45	81	
			W + 46	82	
			W + 47	83	
			W + 48	84	
			W + 49	85	
			W + 50	86	
			W + 51	87	
			W + 52	88	
			W + 53	89	
			W + 54	90	
			W + 55	91	
			W + 56	92	
			W + 57	93	
			W + 58	94	
			W + 59	100	
			W + 60	101	
			W + 61	102	
			W + 62	103	
			W + 63	104	
			W + 64	105	
			W + 65	106	
			W + 66	107	
			W + 67	108	
			W + 68	109	
			W + 69	110	
			W + 70	111	
			W + 71	112	
			W + 72	113	
			W + 73	114	
			W + 74	115	
			W + 75	116	
			W + 76	117	
			W + 77	118	
			W + 78	119	
			W + 79	120	
			W + 80	121	
			W + 81	122	
			W + 82	123	
			W + 83	124	
			W + 84	125	
		SUB MID	A-8	01	I
			A-4	96	
			A-3	97	
			A-2	98	
			A-1	99	
○	×	UHF	14 ~ 69		IV

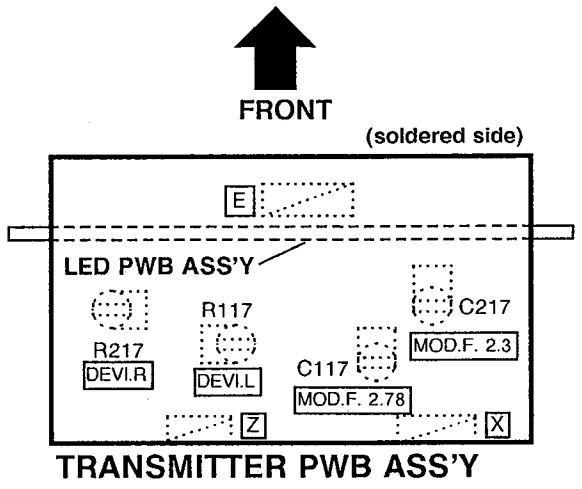
TOTAL 180CH
{ VHF 124CH
{ UHF 56CH

NOTE:
TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES. SPECIAL ADAPTERS MAY BE REQUIED.

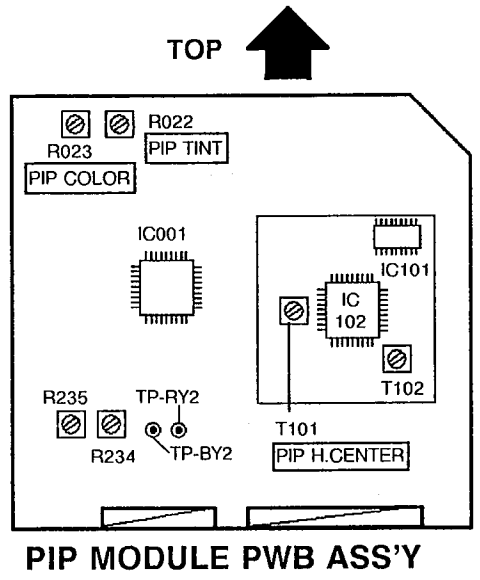
MAIN PARTS LOCATION AND ALIGNMENTS LOCATION



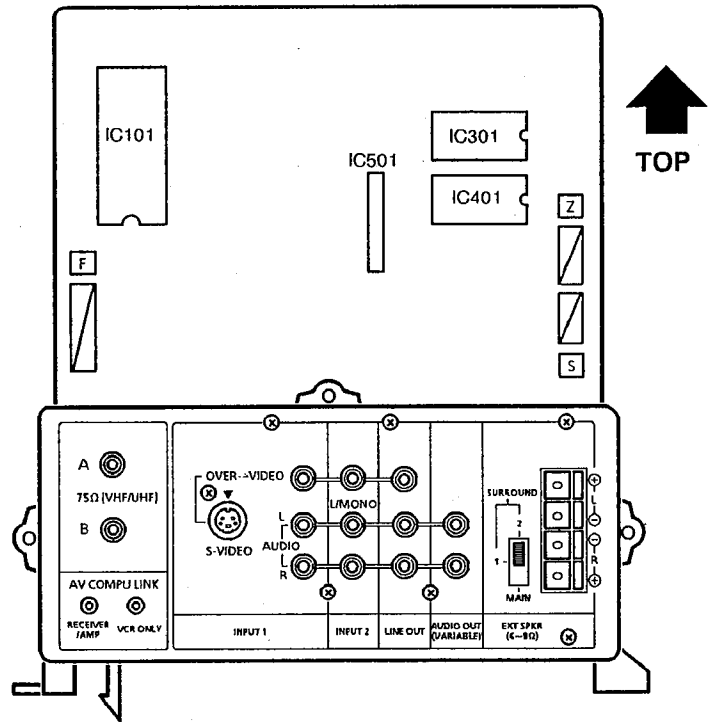
CONTROL PWB ASS'Y (soldered side)



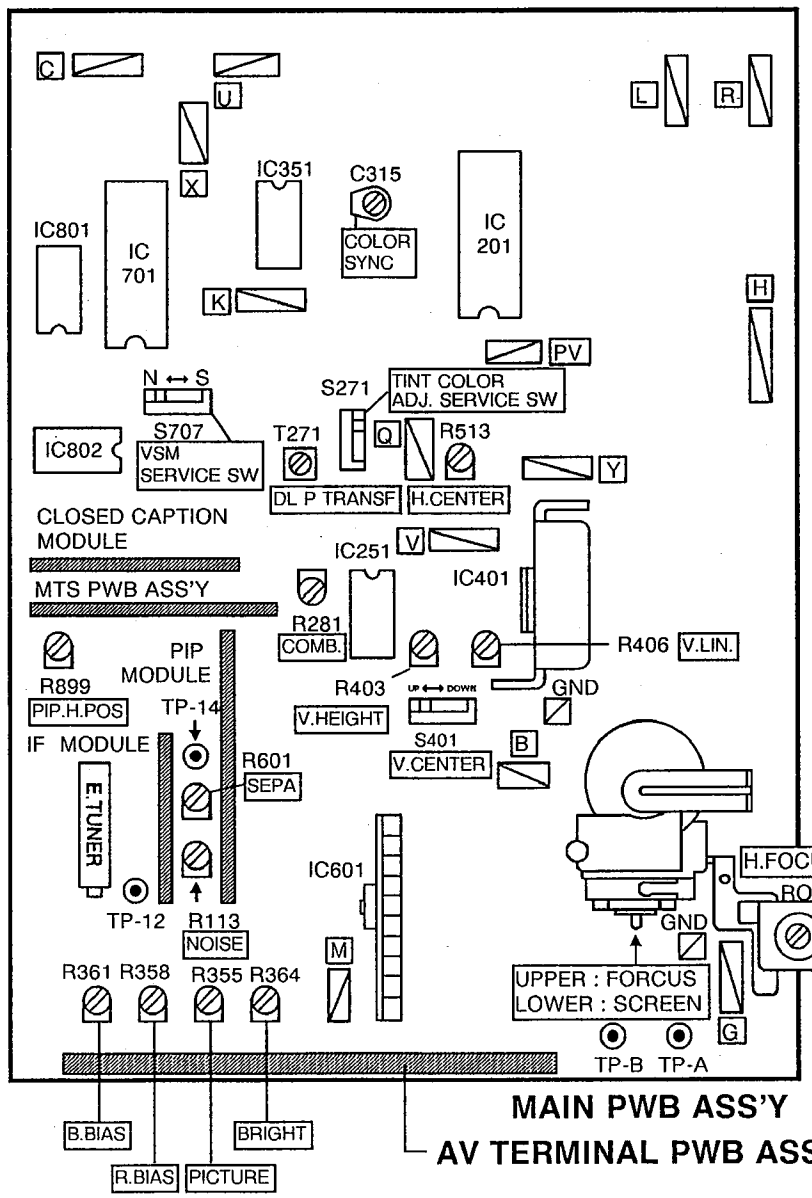
TRANSMITTER PWB ASS'Y



PIP MODULE PWB ASS'Y

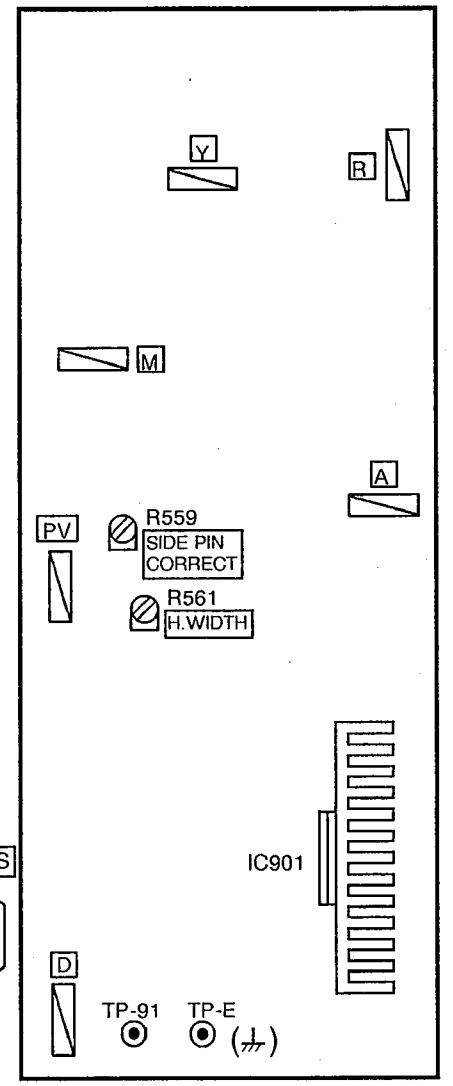


AV TERMINAL PWB ASS'Y



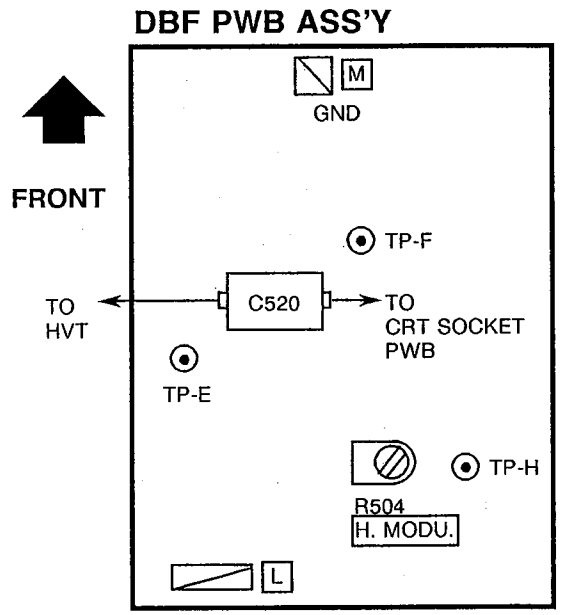
MAIN PWB ASS'Y

AV TERMINAL PWB ASS'Y

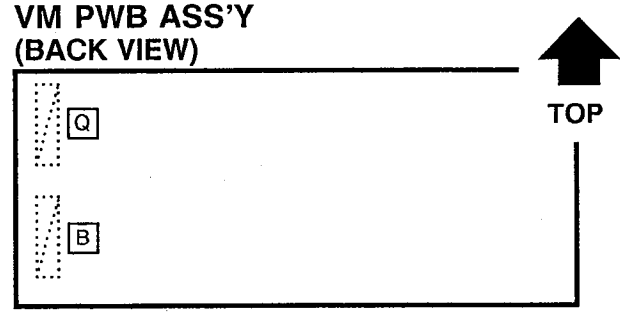


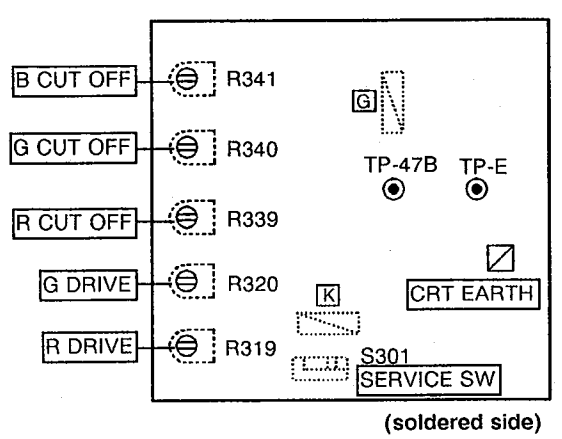
POWER PWB ASS'Y

DBF PWB ASS'Y

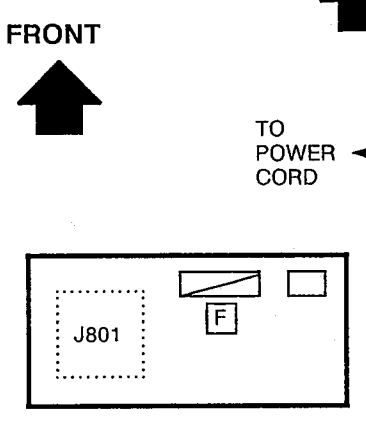


VM PWB ASS'Y (BACK VIEW)

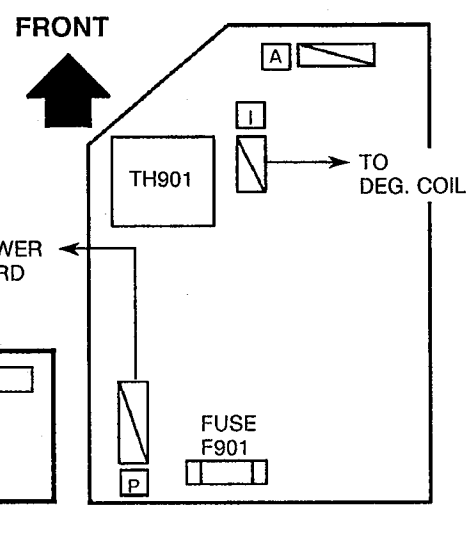




CRT SOCKET PWB ASS'Y



F. AV IN PWB ASS'Y



LINE FILTER PWB ASS'Y

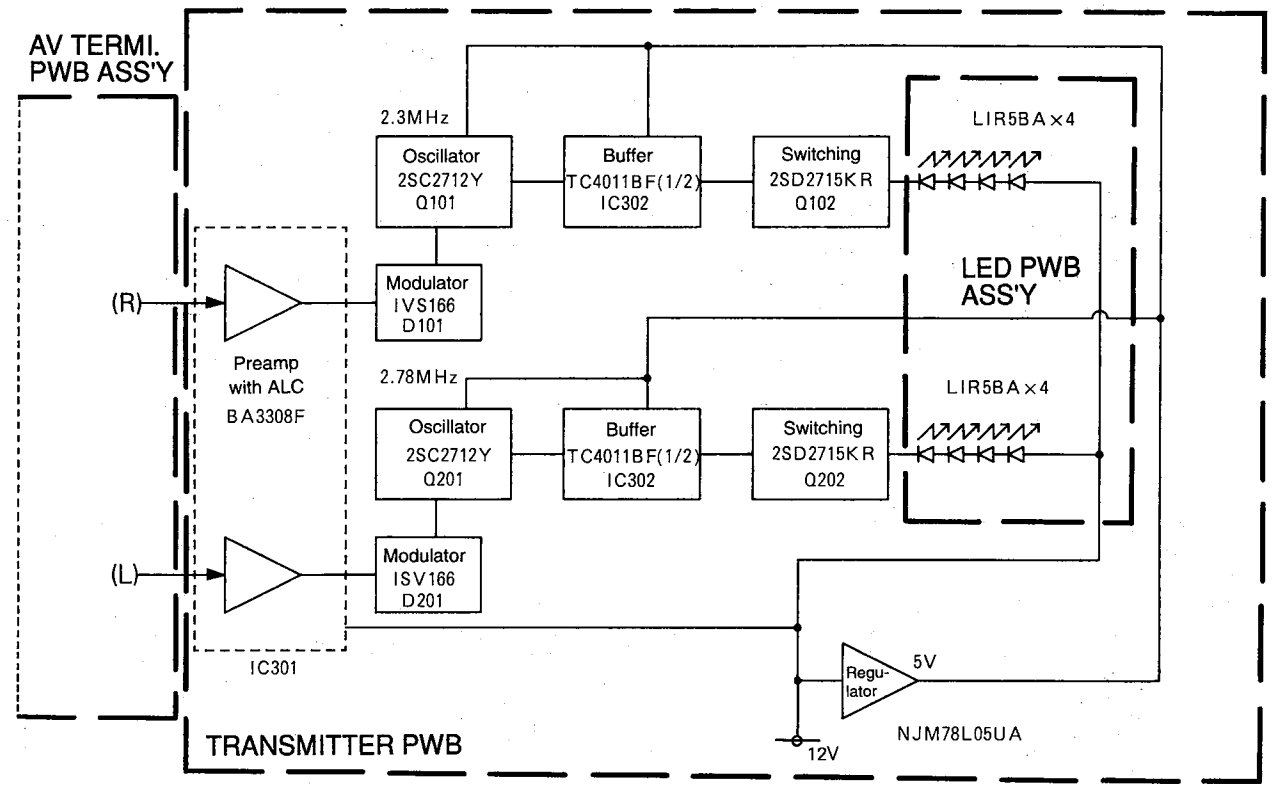
WIRING LIST

P.W.B. or PART NAME	CONNECTOR NAME	WIRE	CONNECTOR NAME	P.W.B. or PART NAME
MAIN PWB ASS'Y	SOLDERING	⟷	D	POWER PWB ASS'Y
MAIN PWB ASS'Y	P	⟷	PV	POWER PWB ASS'Y
MAIN PWB ASS'Y	R	⟷	R	POWER PWB ASS'Y
MAIN PWB ASS'Y	X	⟷	X	TRANSMITTER PWB ASS'Y
MAIN PWB ASS'Y	Y	⟷	Y	POWER PWB ASS'Y
MAIN PWB ASS'Y	B	⟷	B	VM PWB ASS'Y
MAIN PWB ASS'Y	Q	⟷	Q	VM PWB ASS'Y
MAIN PWB ASS'Y	G	⟷	G	CRT SOCKET PWB ASS'Y
MAIN PWB ASS'Y	K	⟷	K	CRT SOCKET PWB ASS'Y
MAIN PWB ASS'Y	C	⟷	C	F. CONTROL PWB ASS'Y
MAIN PWB ASS'Y	U	⟷	U	F. CONTROL PWB ASS'Y
MAIN PWB ASS'Y	SOLDERING	⟷	M	DBF PWB ASS'Y
MAIN PWB ASS'Y	L	⟷	L	DBF PWB ASS'Y
MAIN PWB ASS'Y	M	⟷	M	POWER PWB ASS'Y
AV TERMI. PWB ASS'Y	F	⟷	F	F. AV IN PWB ASS'Y
AV TERMI. PWB ASS'Y	Z	⟷	Z	TRANSMITTER PWB ASS'Y
MAIN PWB ASS'Y	H	⟷		DEF. YOKE ASS'Y
MAIN PWB ASS'Y	V	⟷		DEF. YOKE ASS'Y
POWER PWB ASS'Y	A	⟷	A	LINE FILTER PWB ASS'Y
LINE FILTER PWB ASS'Y	I	⟷		DEG. COIL
LINE FILTER PWB ASS'Y	P	⟷		POWER CORD
AV TERMINAL PWB ASS'Y	S	⟷	RECEPTACLE	SPEAKER (L/R)
CRT SOCKET PWB ASS'Y	GND	⟷	EARTH WIRE	CRT

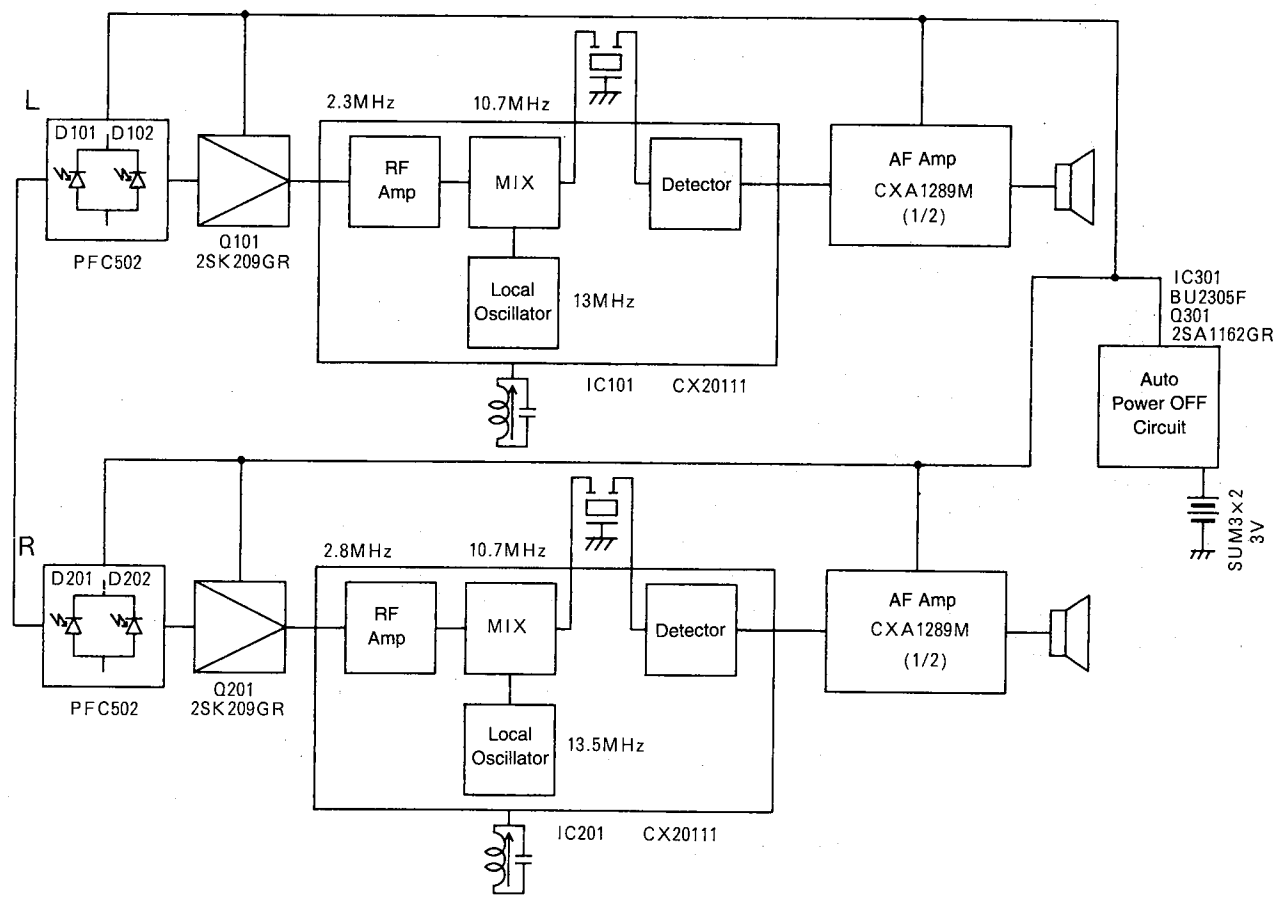
●NOTE:Refer to Main Parts and Alignment Locations (Page 2-5,Page 2-6) for detailed connector positions.

BLOCK DIAGRAM (A)

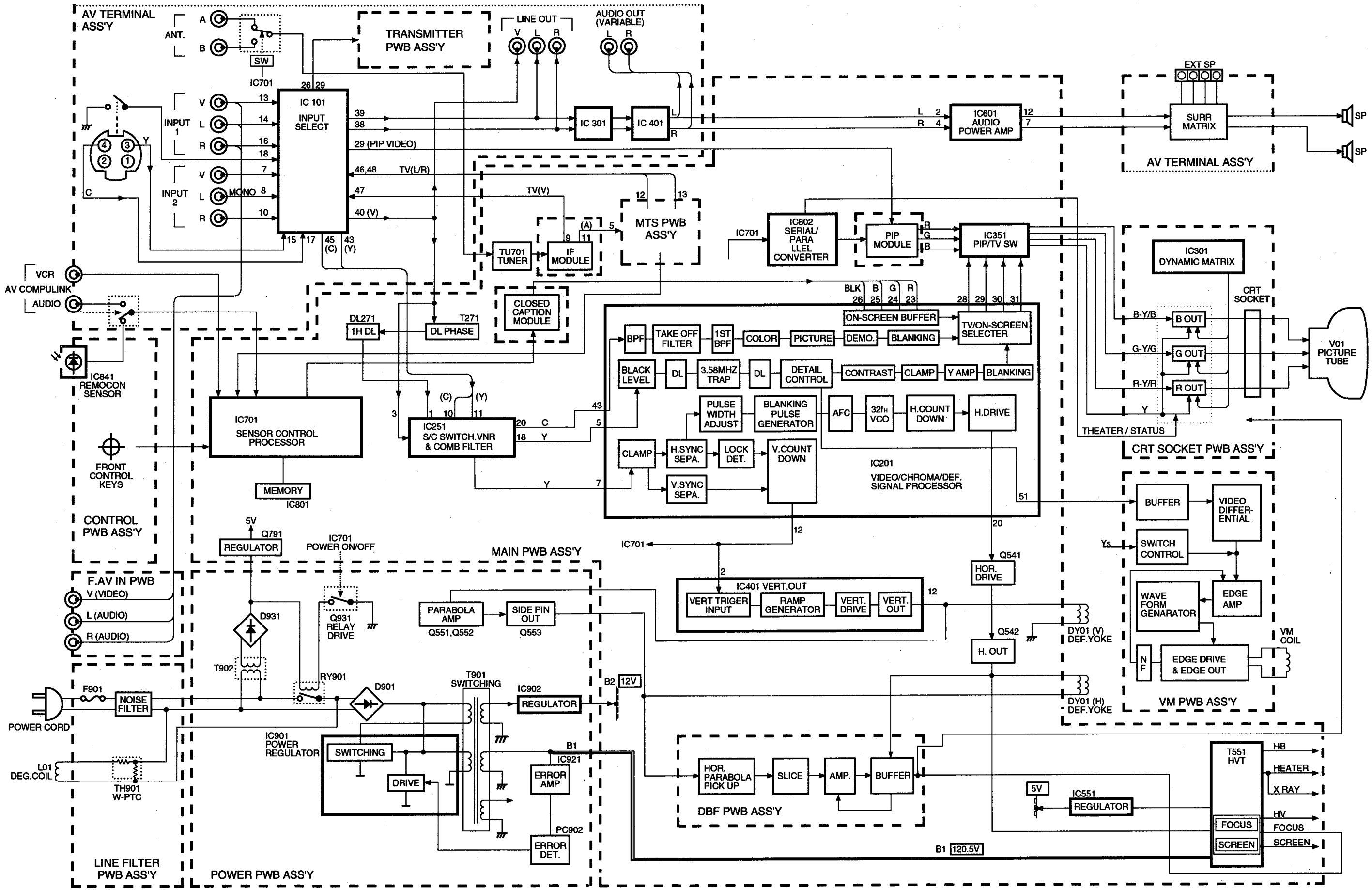
Transmitter



Headphones (Receiver)



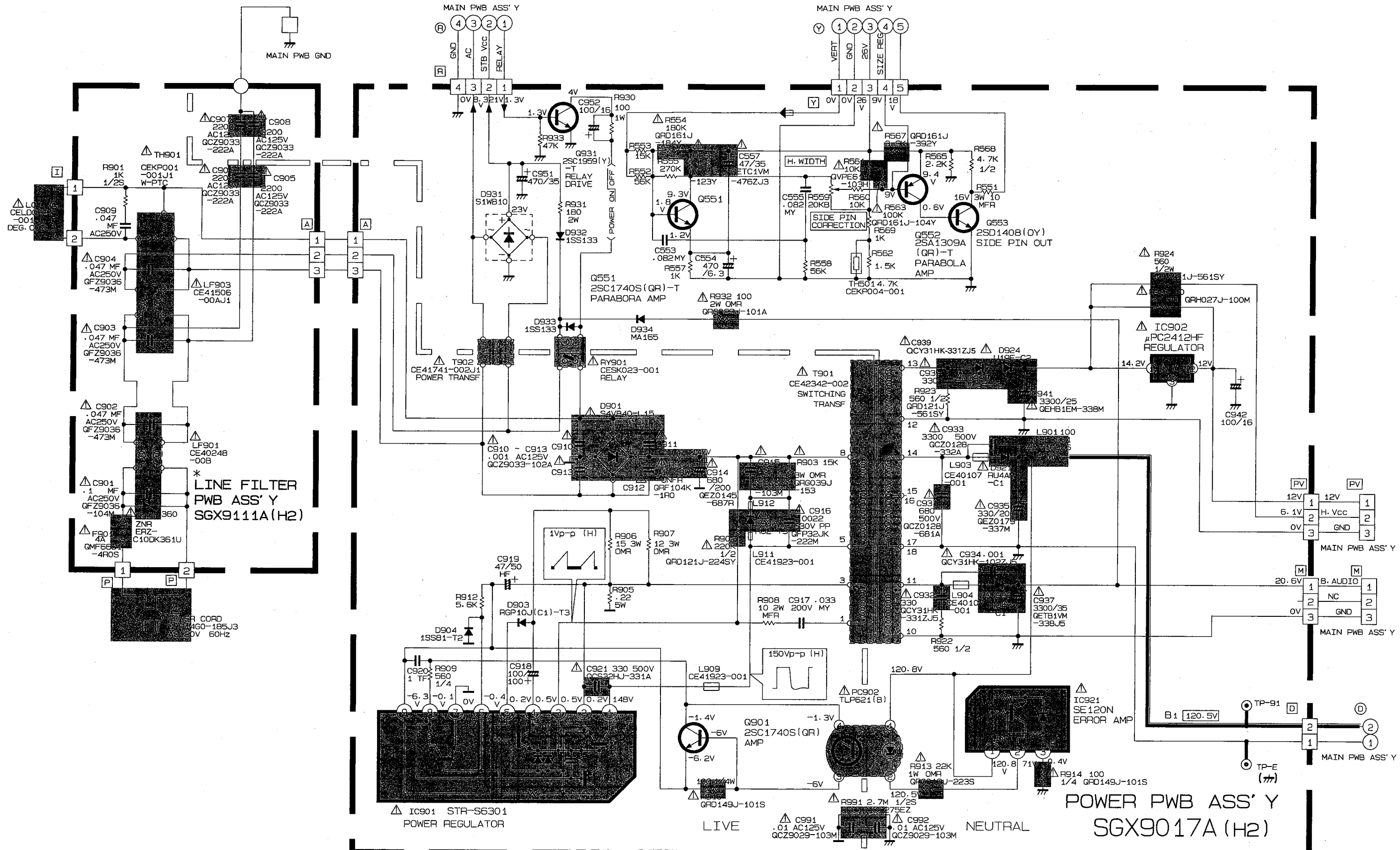
BLOCK DIAGRAM (B)



CIRCUIT DIAGRAMS AND PWB PATTERNS

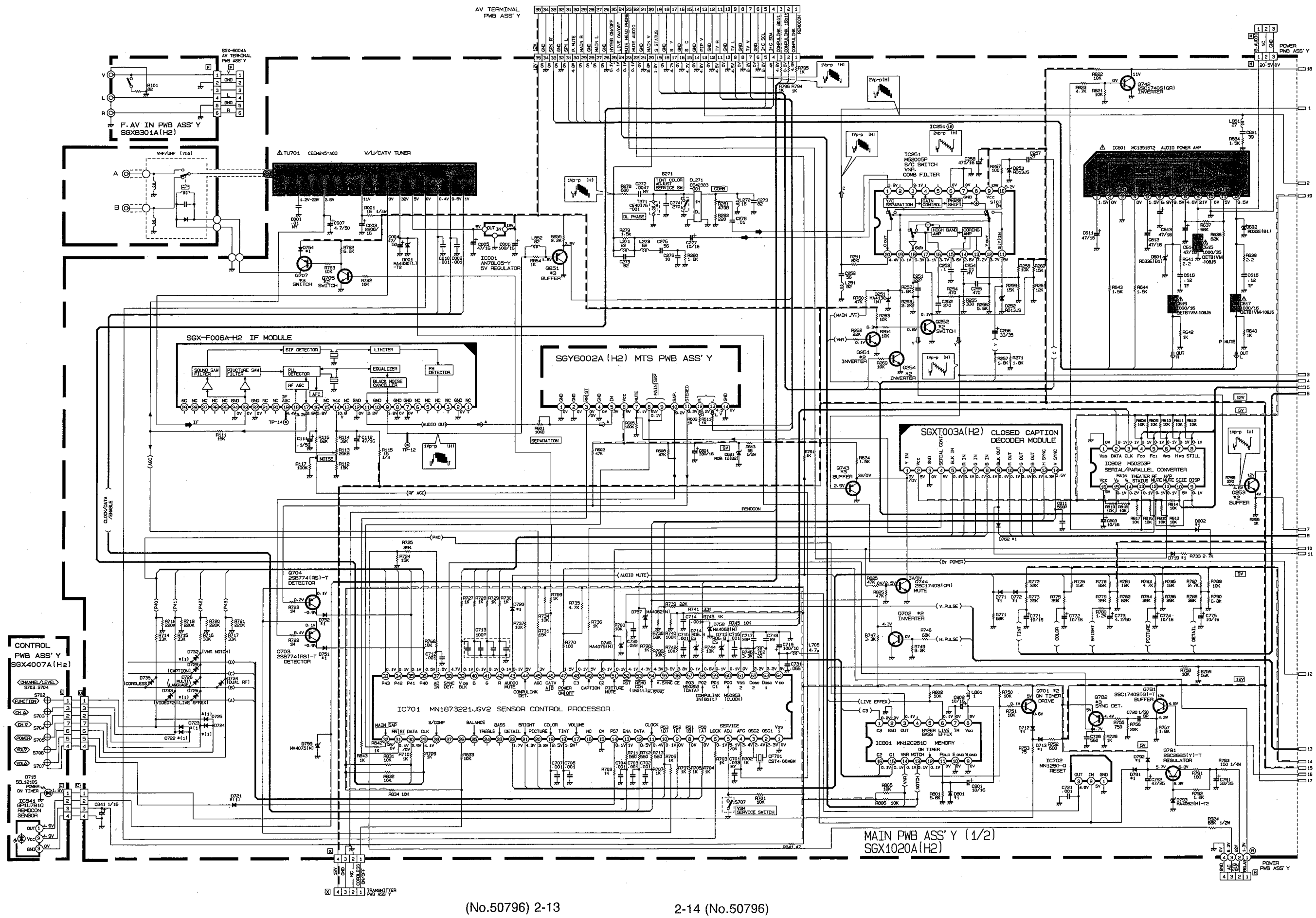
LINE FILTER & POWER PWB CIRCUIT DIAGRAMS

Refer to the following PWB pattern. : LINE FILTER PWB PATTERN page 2-32, POWER PWB PATTERN page 2-33.

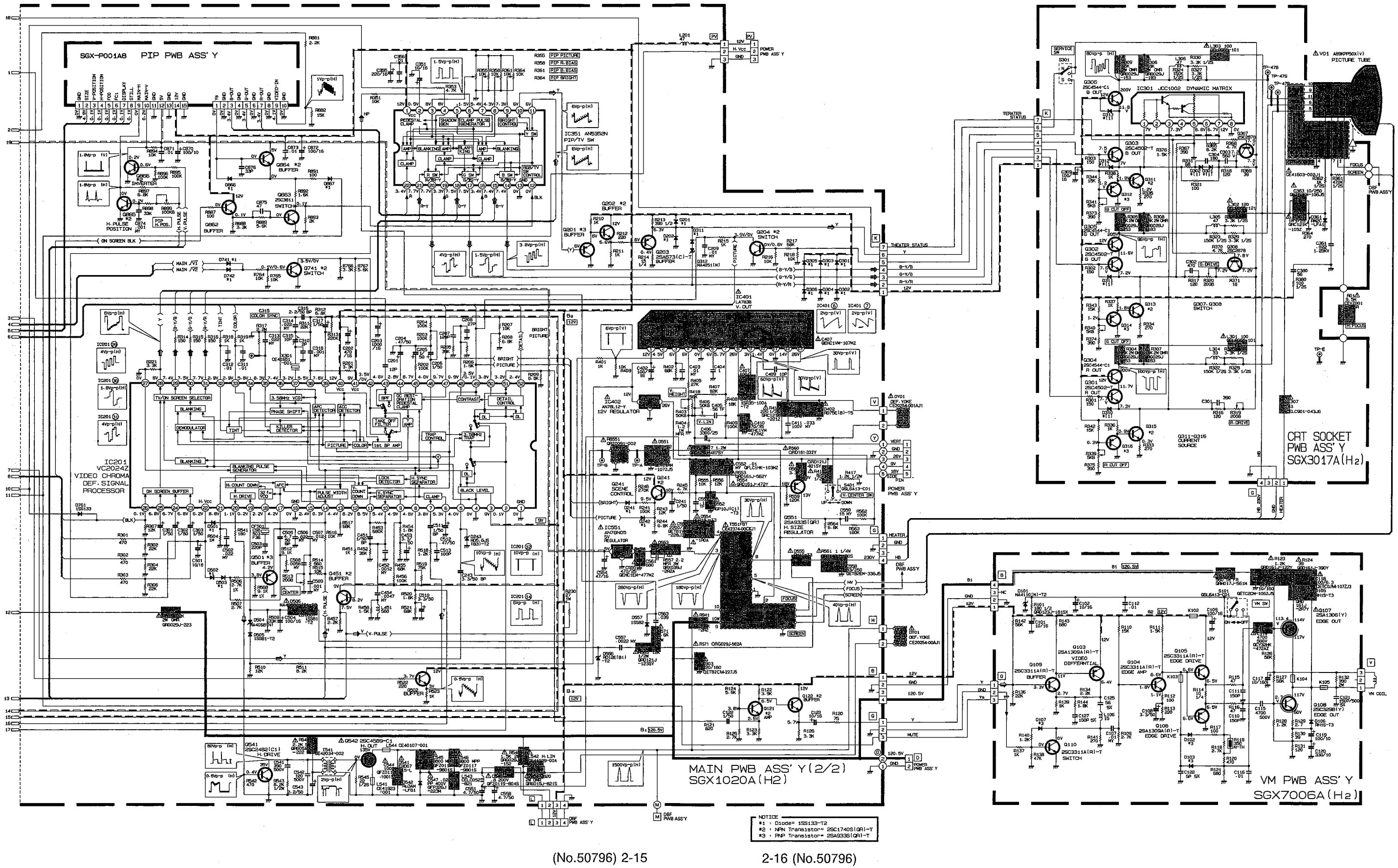


MAIN , CRT SOCKET, FRONT CONTROL & VM PWB CIRCUIT DIAGRAMS

Refer to the following PWB pattern. : FRONT CONTROL PWB PATTERN page 2-29, MAIN PWB PATTERN page 2-27～2-28.

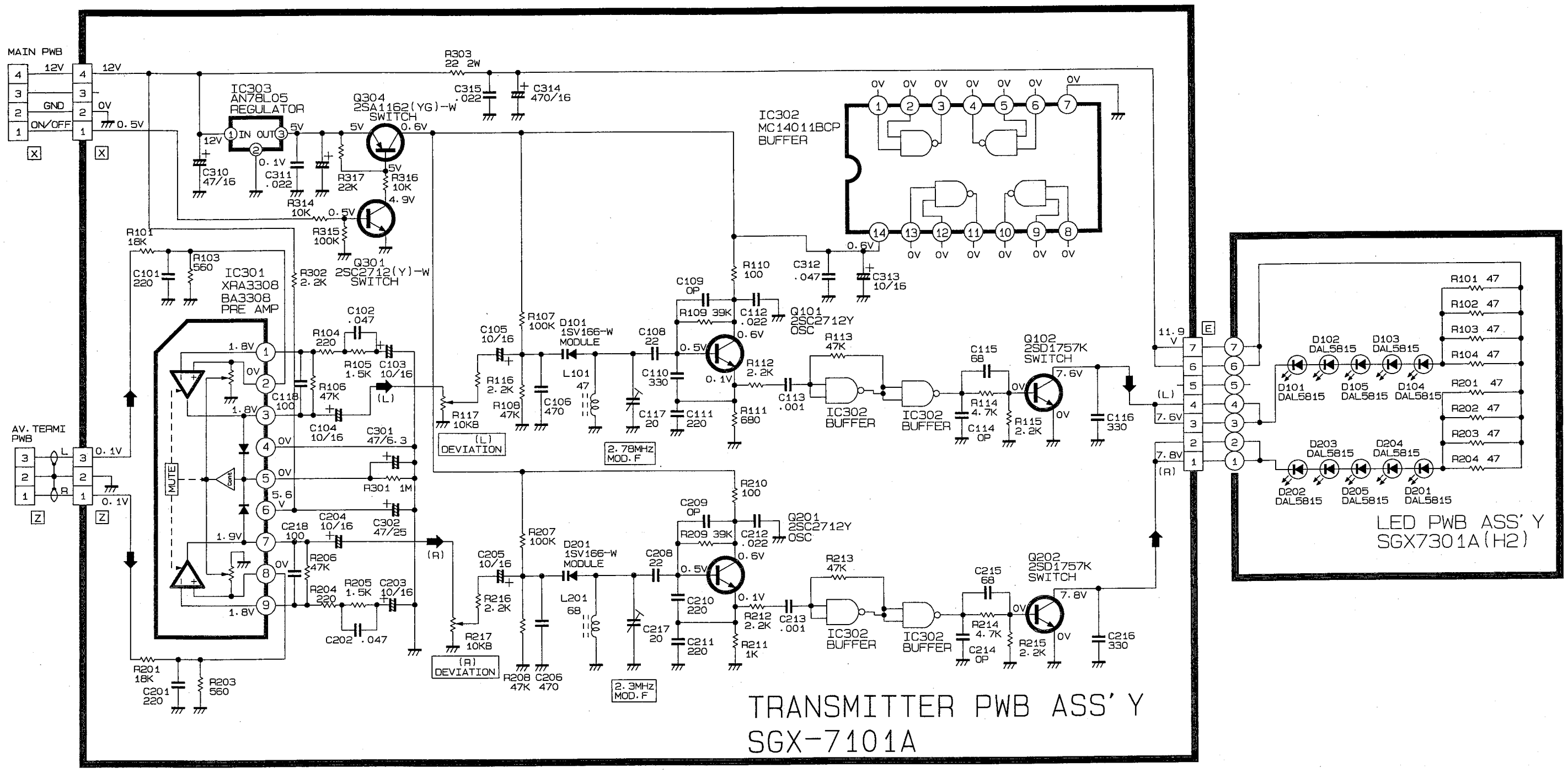


Refer to the following PWB pattern. : VM PWB PATTERN page 2-30, CRT SOCKET PWB PATTERN page 2-29.



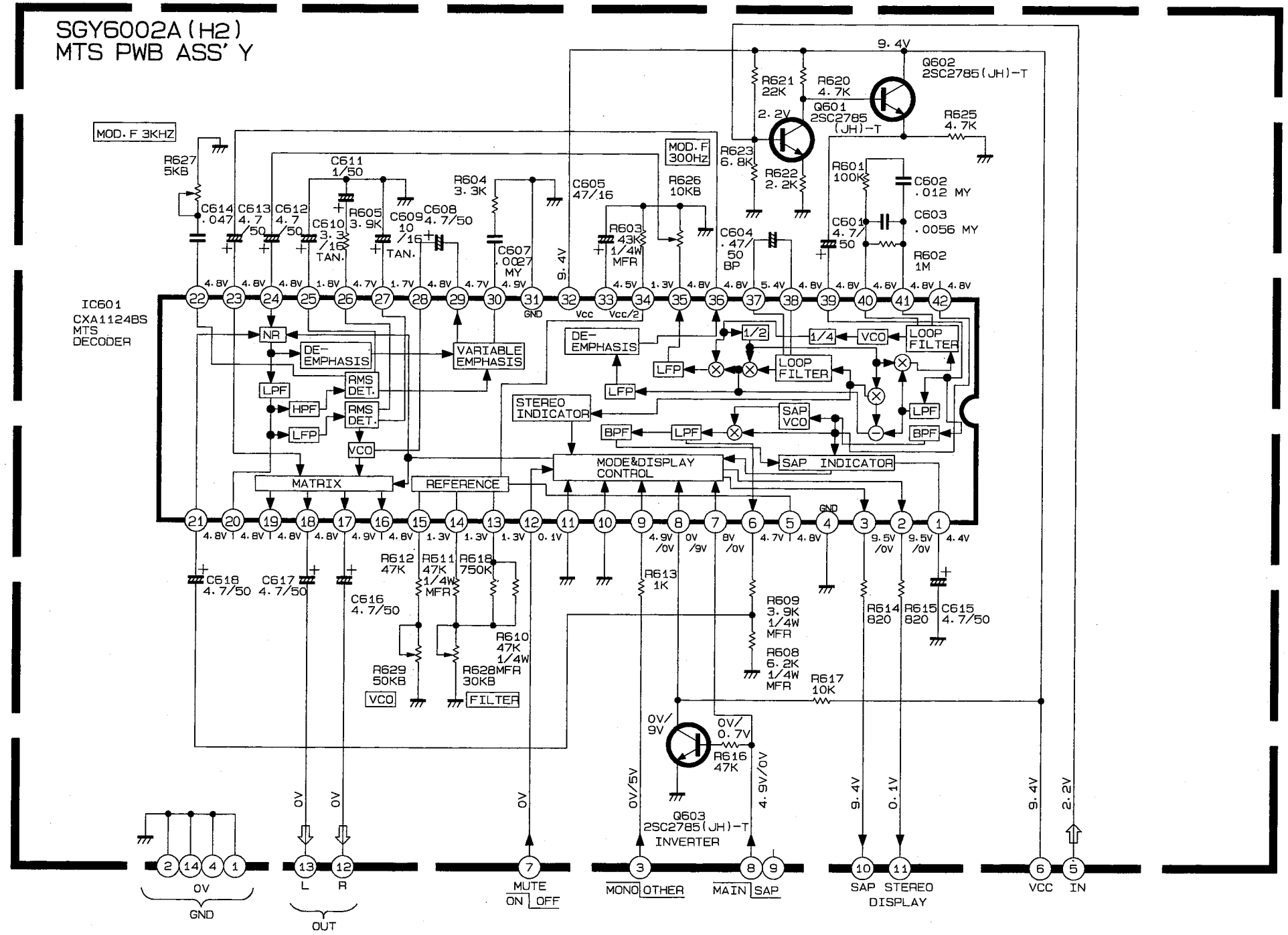
TRANSMITTER & LED PWB CIRCUIT DIAGRAMS

Refer to the following PWB pattern. : TRANSMITTER PWB PATTERN page 2-34, LED PWB PATTERN page 2-34.



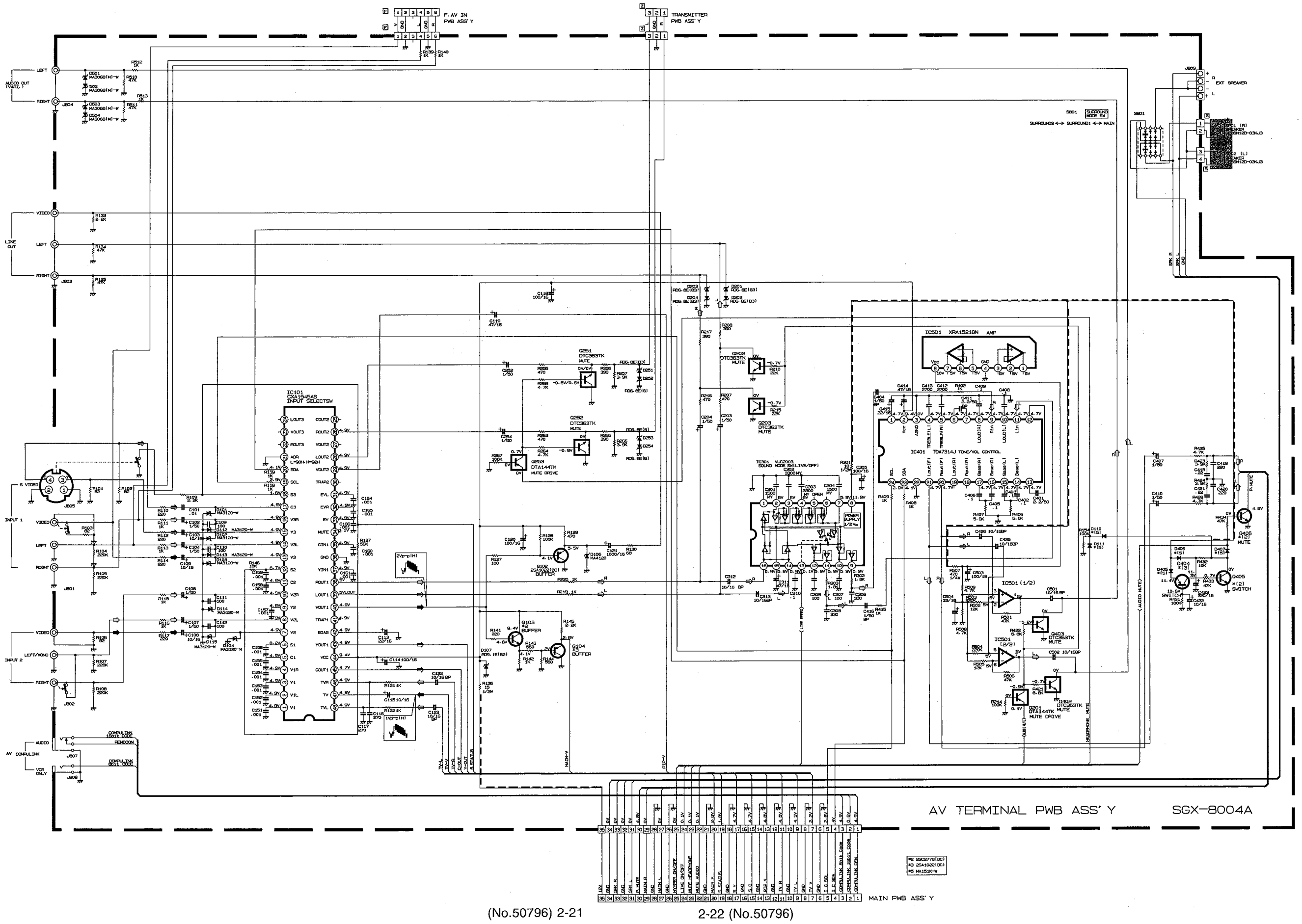
MTS PWB CIRCUIT DIAGRAM

Refer to the following PWB pattern. : MTS PWB PATTERN page 2-35.



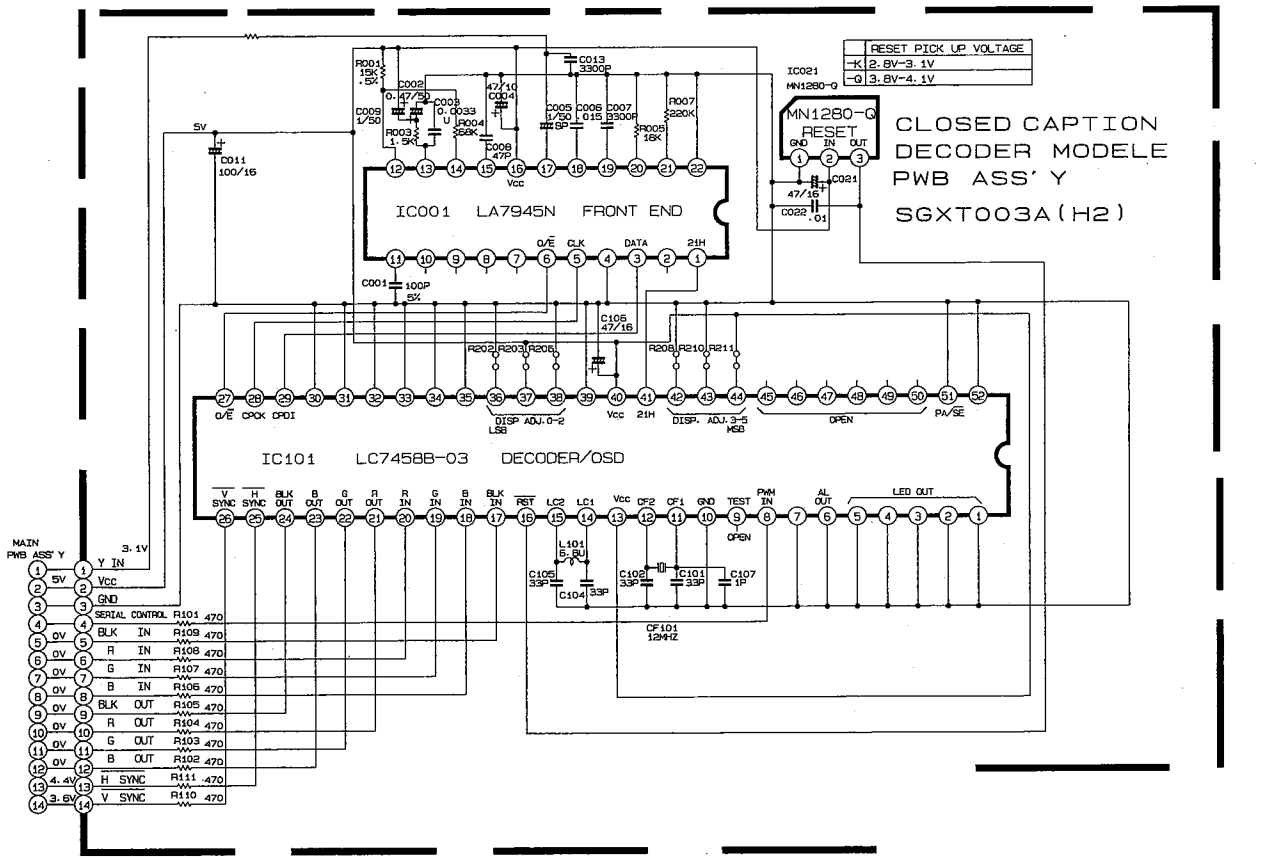
AV TERMINAL PWB CIRCUIT DIAGRAM

Refer to the following PWB pattern. : AV TERMINAL PWB PATTERN page 2-31.



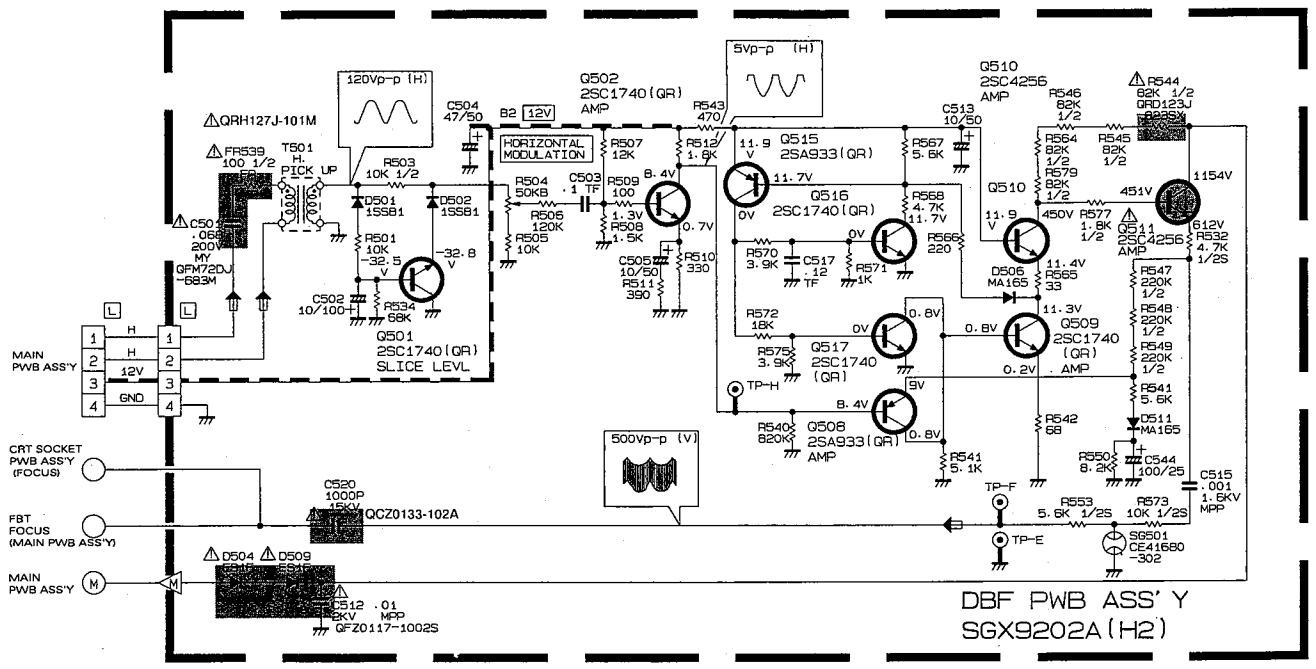
PIP MODULE PWB CIRCUIT DIAGRAM

CLOSED CAPTION MODULE PWB CIRCUIT DIAGRAM

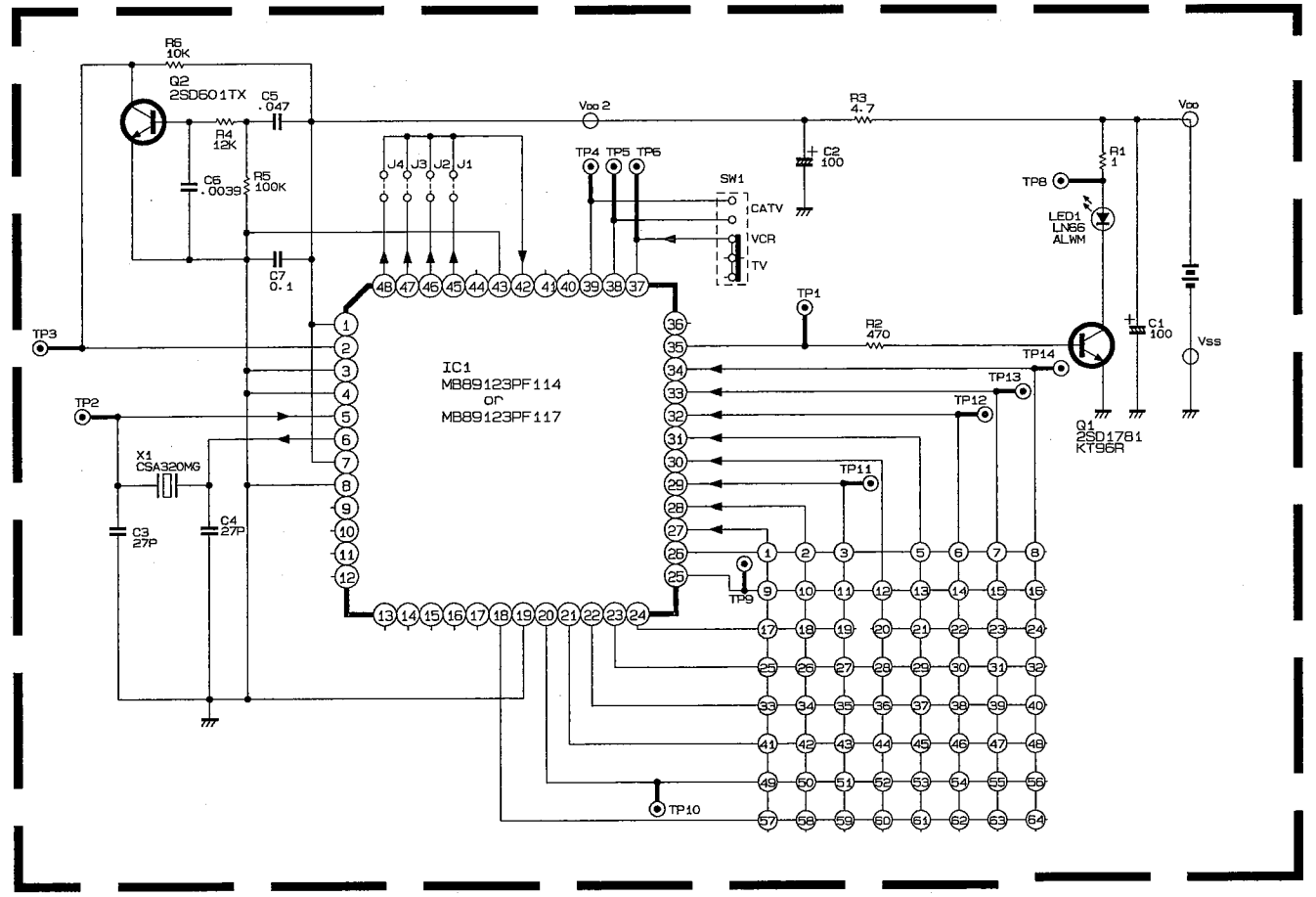


DBF PWB CIRCUIT DIAGRAM

Refer to the following PWB pattern. : DBF PWB PATTERN page 2-30.



REMOTE CONTROL TRANSMITTER CIRCUIT DIAGRAM (RM-C672-01-KH)



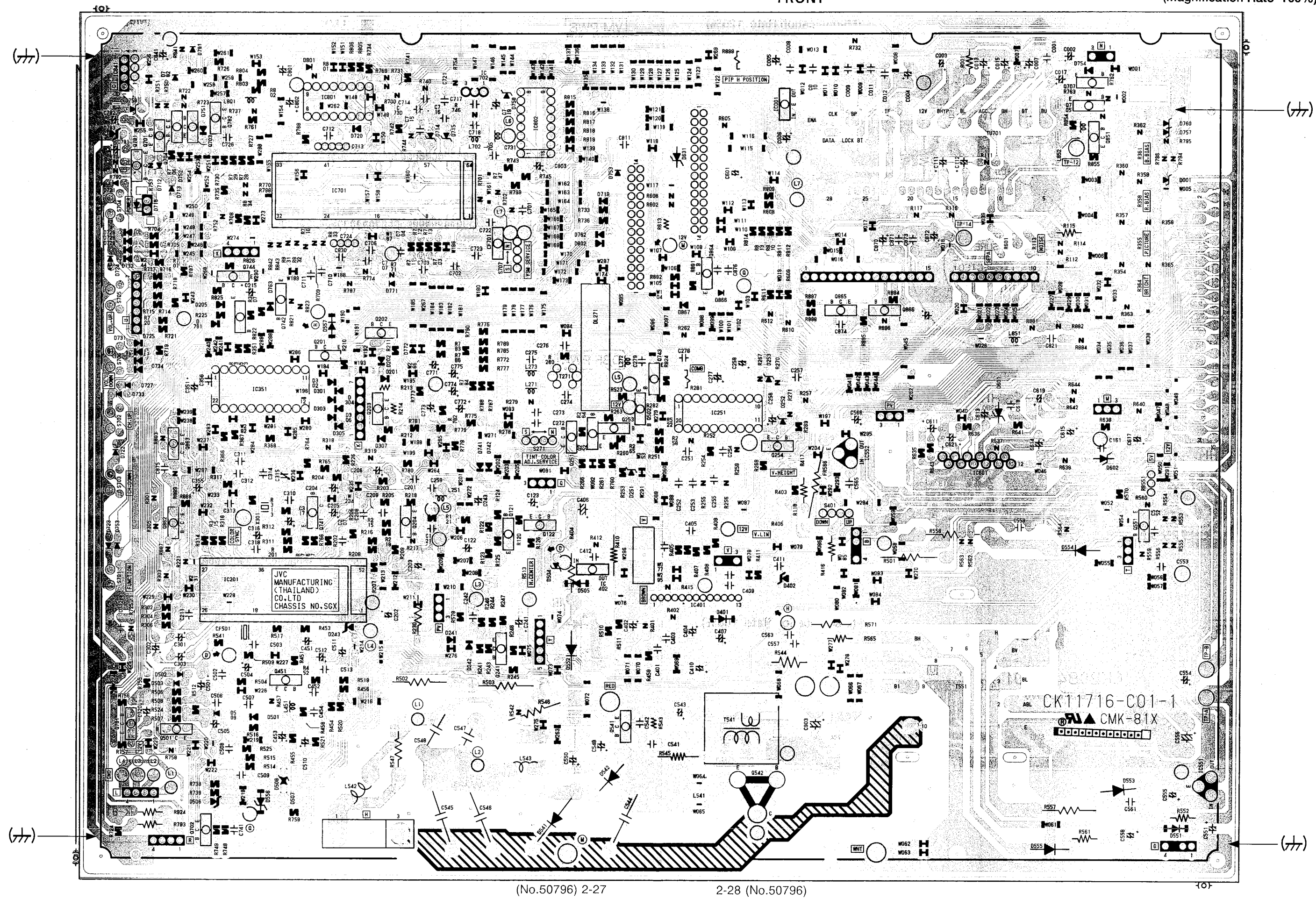
- **KEY FUNCTION (RM-C672-01-KH)**

No	Key name	No	Key name	No	Key name
1	MENU	15	VOLUME −	53	100+
2	CLOSED CAPTION	16	VOLUME +	54	POWER
3	C1/C2	42	0	55	CHANNEL −
5	PIP ON/OFF	43	1	56	CHANNEL +
6	FREEZE	44	2	57	DISPLAY
7	LIVE EFFEX	45	3	58	SWAP
8	TV/VIDEO	46	4	59	ANT/CABLE
9	THEATER/AVSTA	47	5	60	SOURCE
10	FUNCTION −	48	6	61	SIZE
11	FUNCTION △	49	7	62	MAIN/SAP
12	FUNCTION ▽	50	8	63	CATEGORY PREVIEW
13	FUNCTION +	51	9	64	CORDLESS ON/OFF
14	MUTE	52	RETURN		

MAIN PWB PATTERN [SGX1020A(H2)]

FRONT

(Magnification Rate 100%)

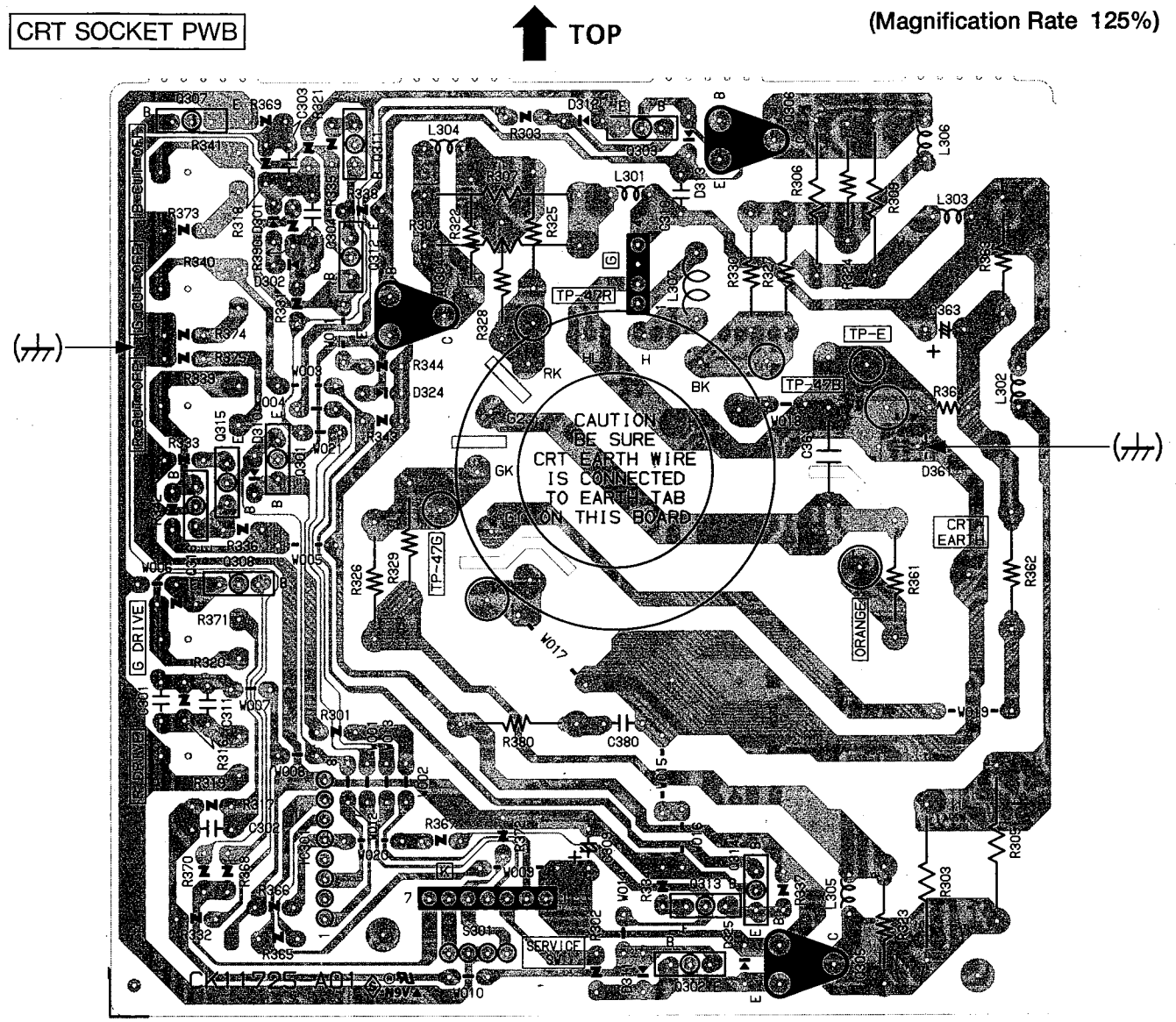


CRT SOCKET PWB [SGX3017A(H2)], CONTROL PWB [SGX4007A(H2)]
VM PWB [SGX7006A(H2)], DBF PWB [SGX9202A(H2)], PATTERNS

CRT SOCKET PWB

TOP

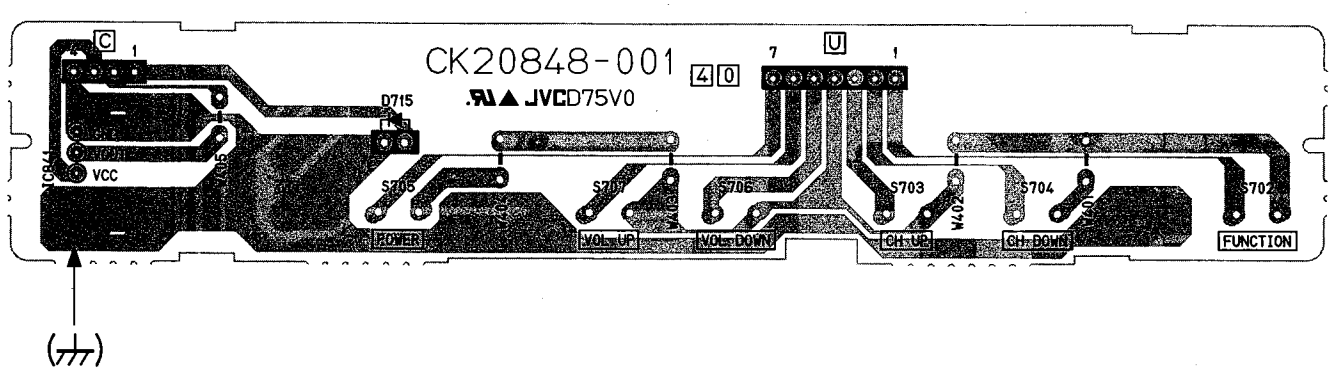
(Magnification Rate 125%)



CONTROL PWB

TOP

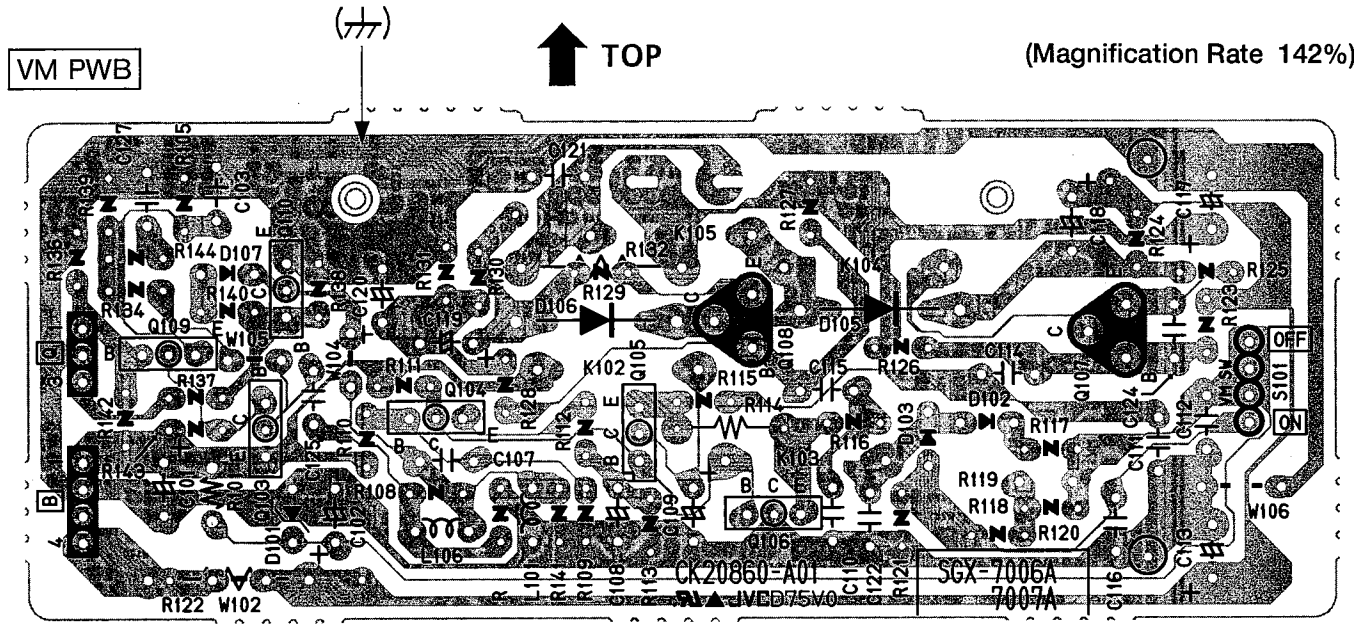
(Magnification Rate 108%)



VM PWB

TOP

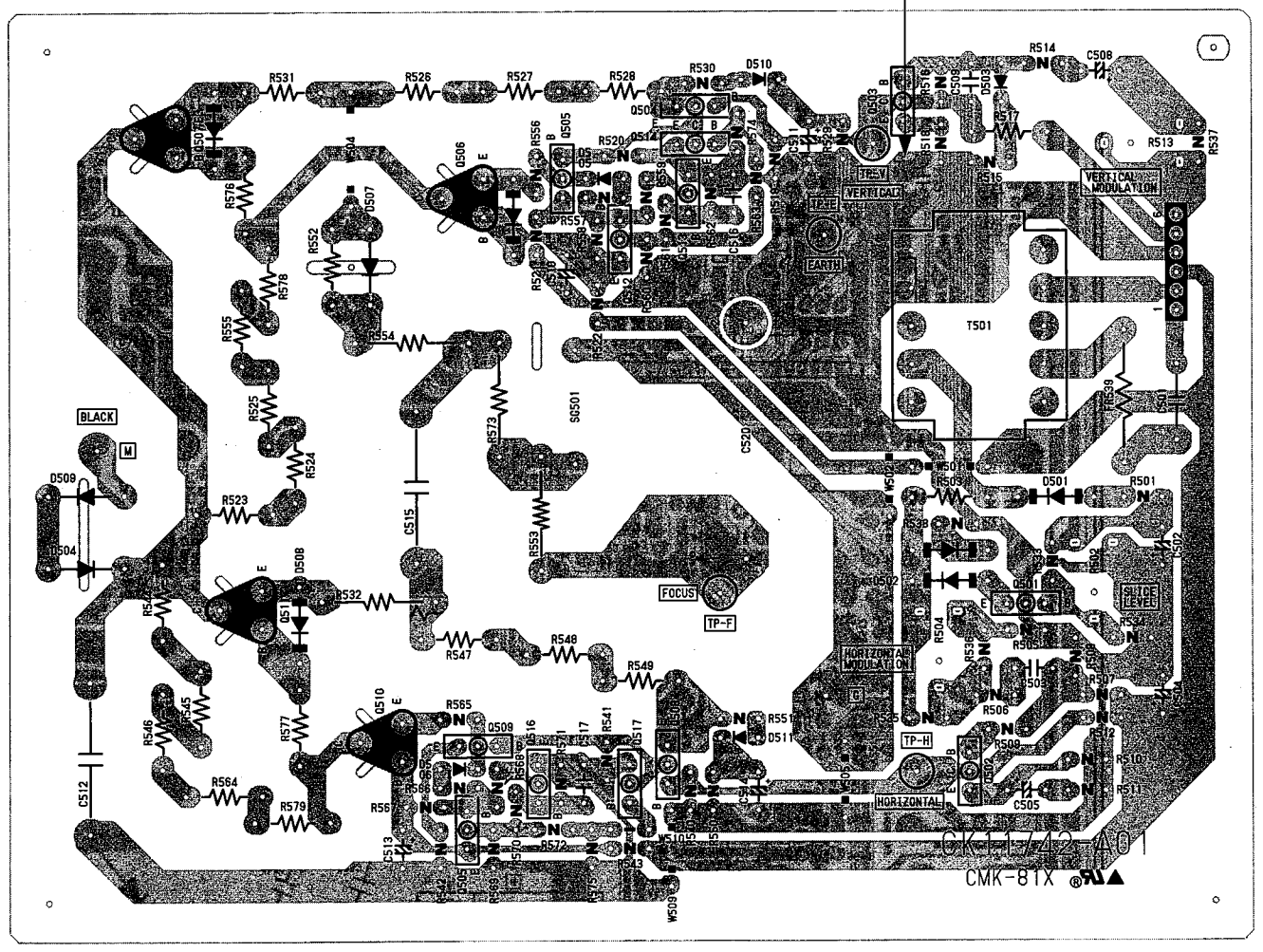
(Magnification Rate 142%)



DBF PWB

FRONT

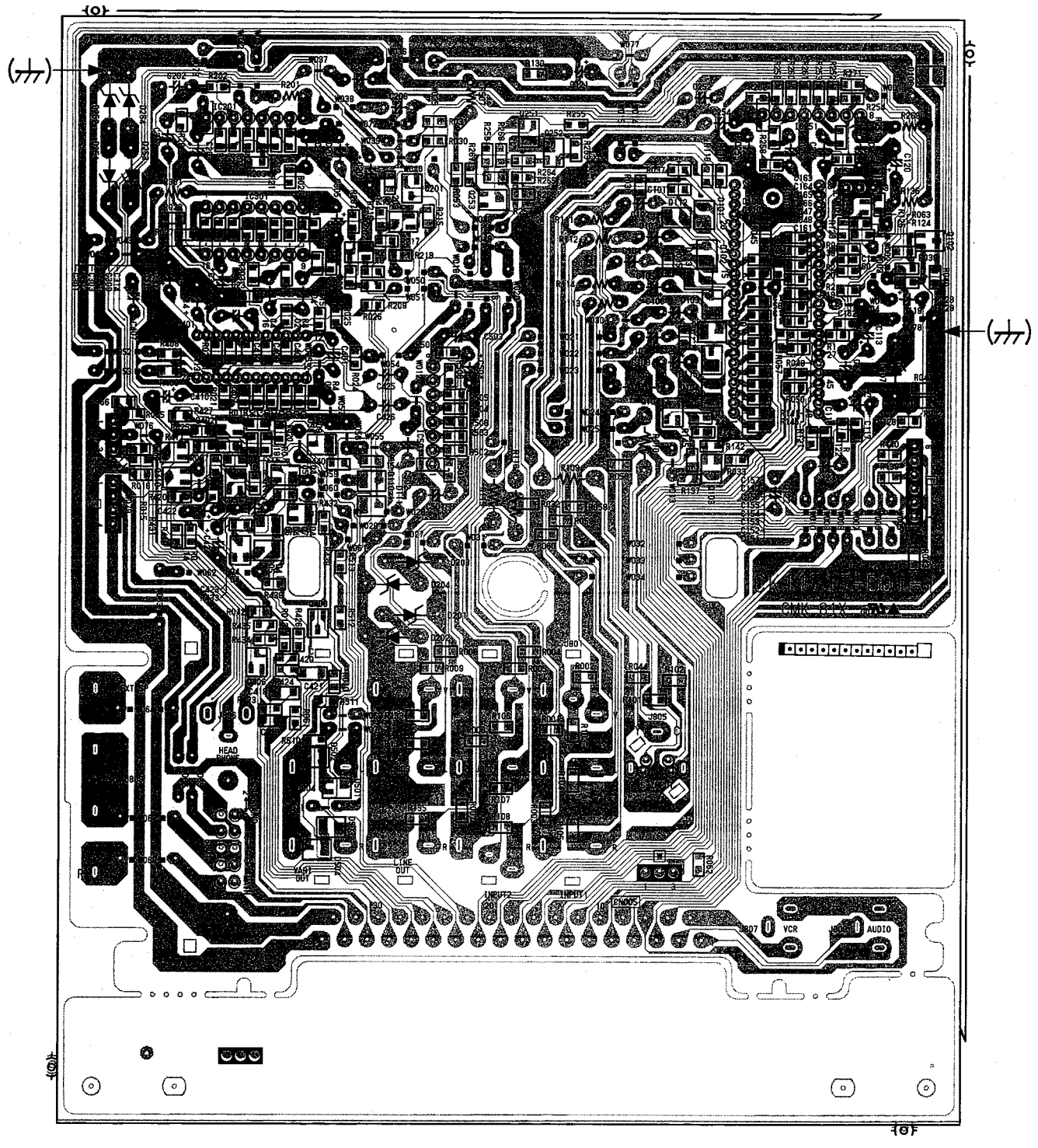
(Magnification Rate 106%)



AV TERMINAL PWB PATTERN [SGX-8004A]

(Magnification Rate 95%)

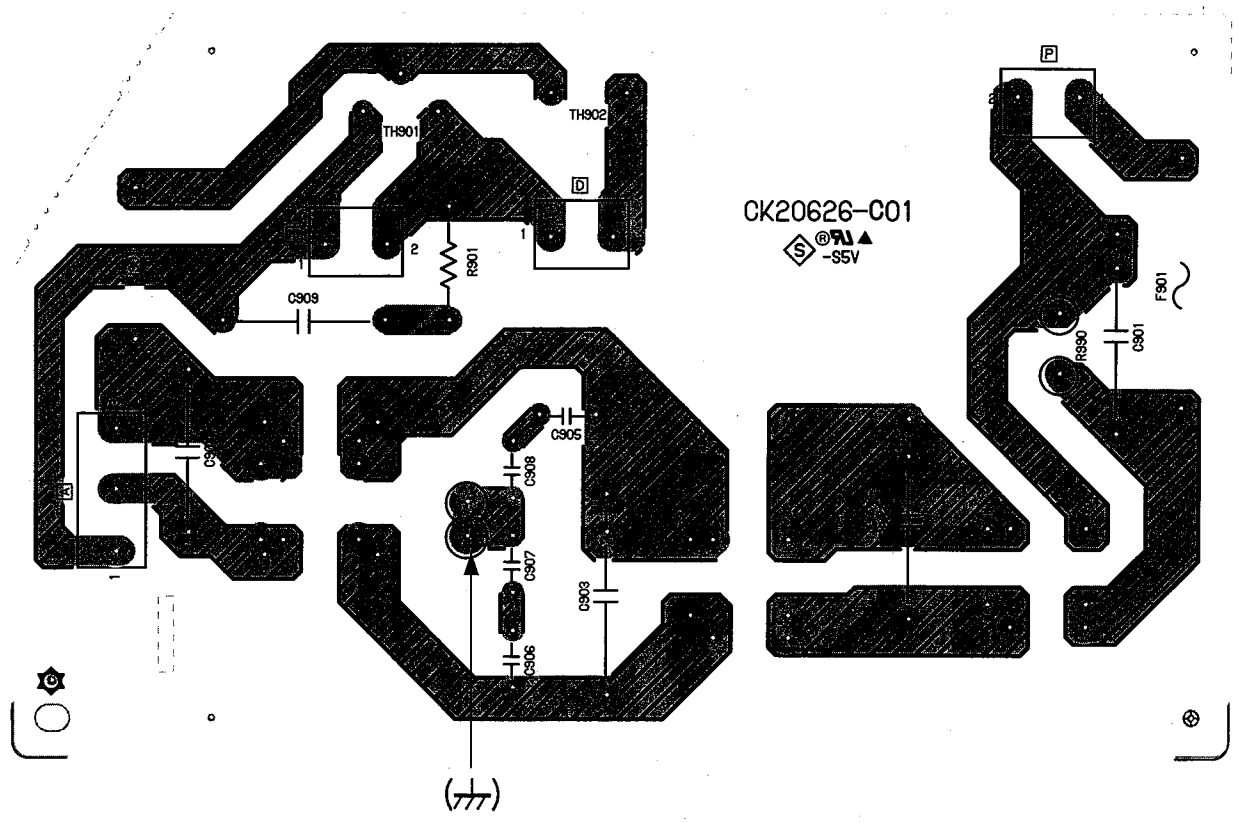
TOP



LINE FILTER PWB PATTERN [SGX9111A(H2)]

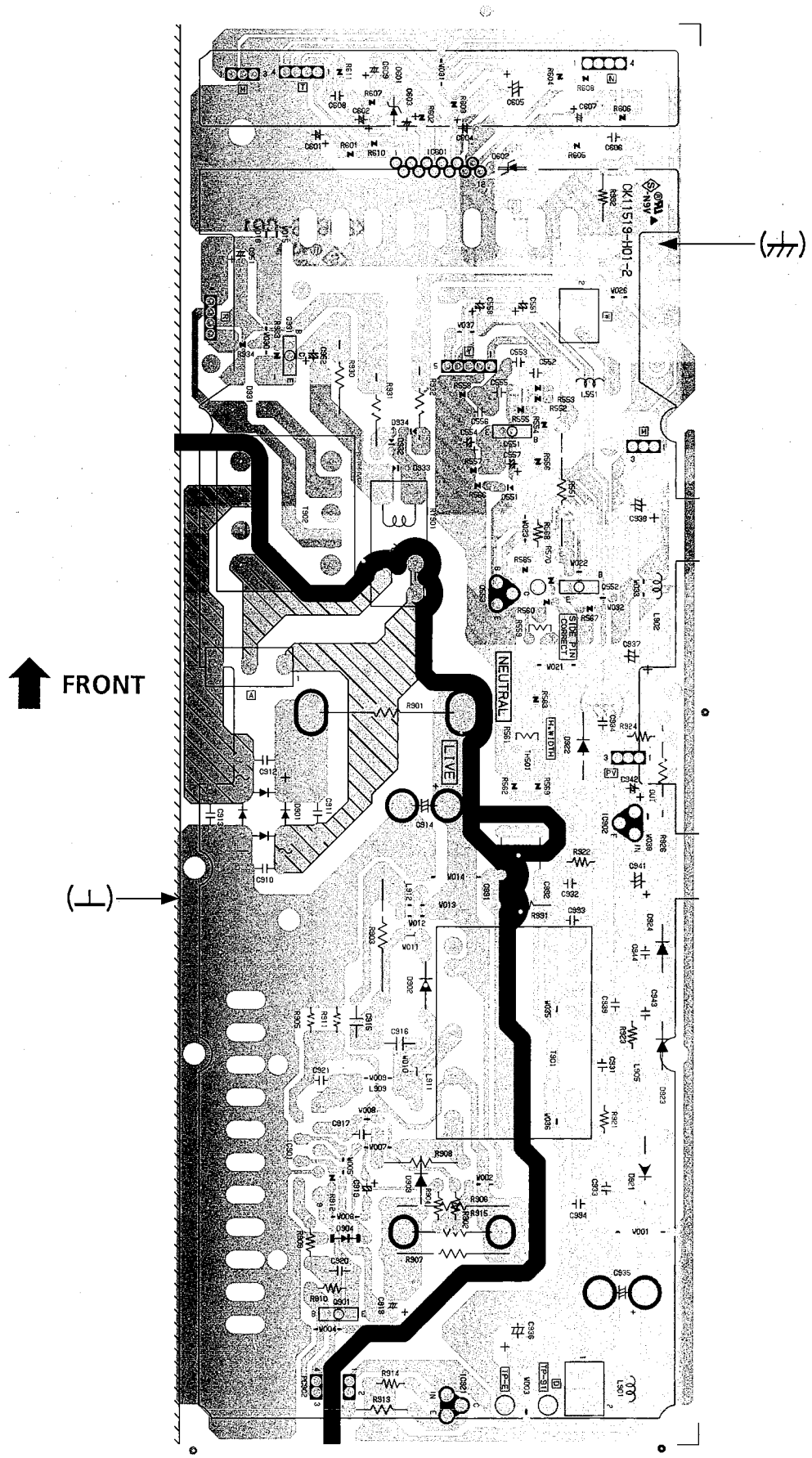
(Magnification Rate 100%)

FRONT



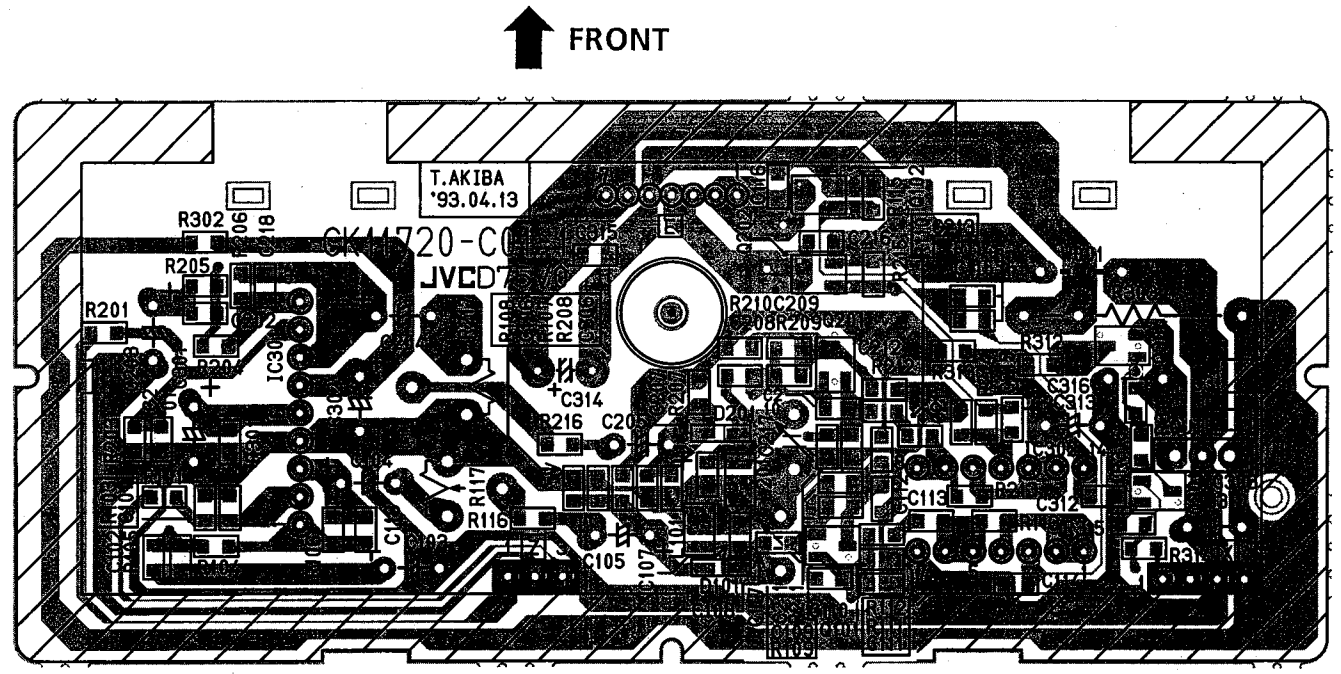
POWER PWB PATTERN [SGX9017A(H2)]

(Magnification Rate 70%)



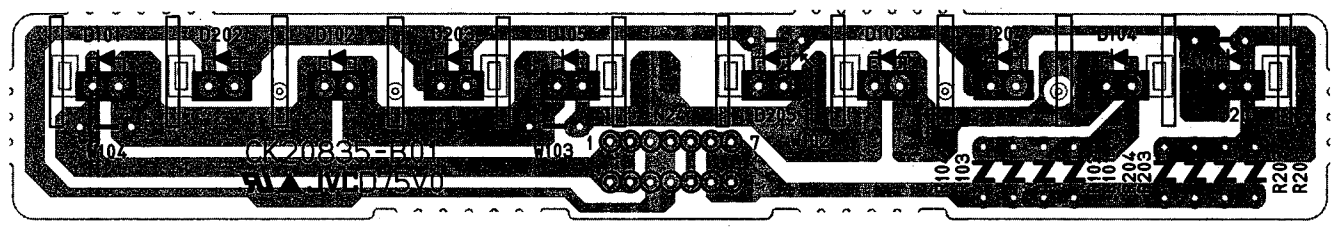
TRANSMITTER PWB PATTERN [SGX-7101A]

(Magnification Rate 145%)



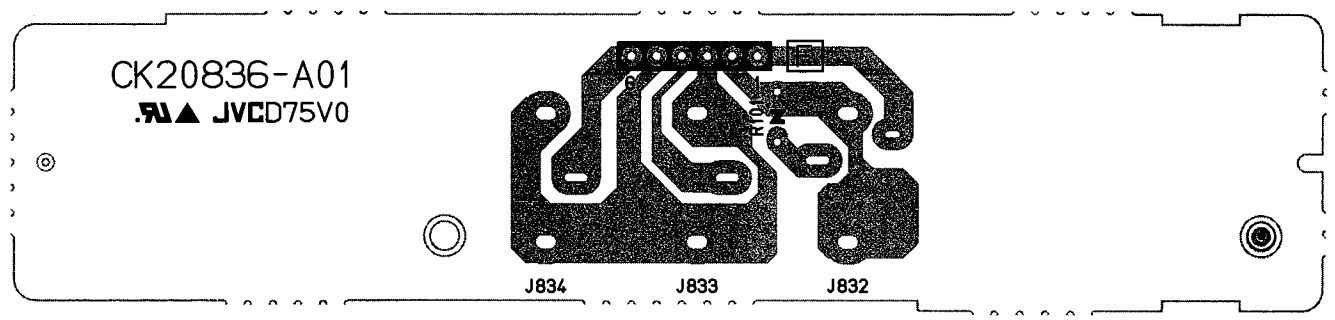
LED PWB PATTERN [SGX7301A(H2)]

(Magnification Rate 134%)



FRONT AV IN PWB PATTERN [SGX8301A(H2)]

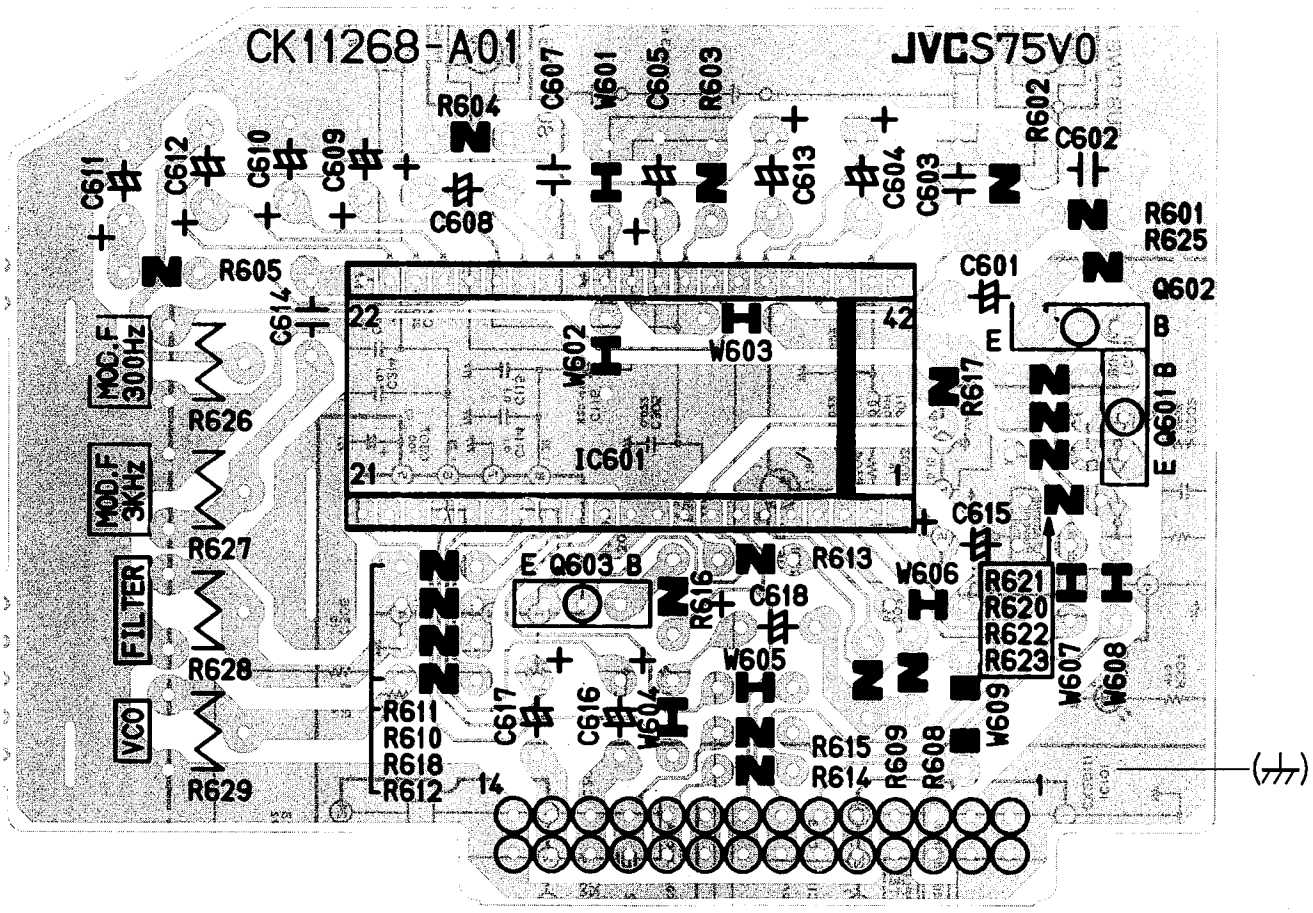
(Magnification Rate 134%)



MTS PWB PATTERN [SGY6002A(H2)]

(Magnification Rate 200%)

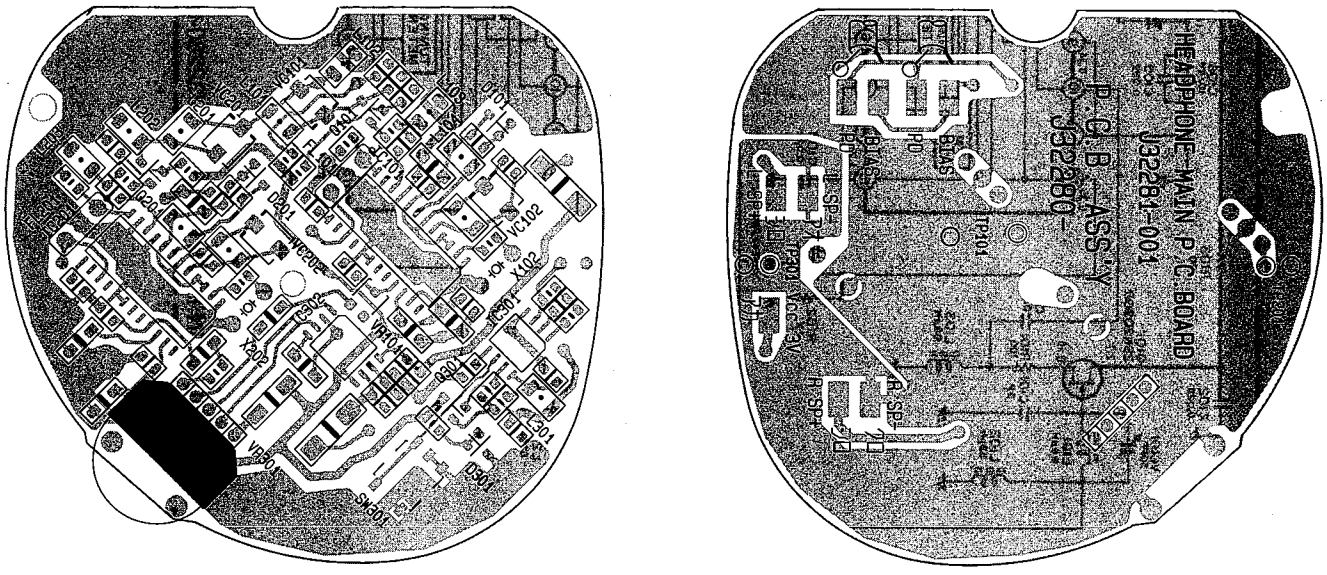
TOP



HEADPHONE PWB PATTERN [HA-W55T]

(Magnification Rate 120%)

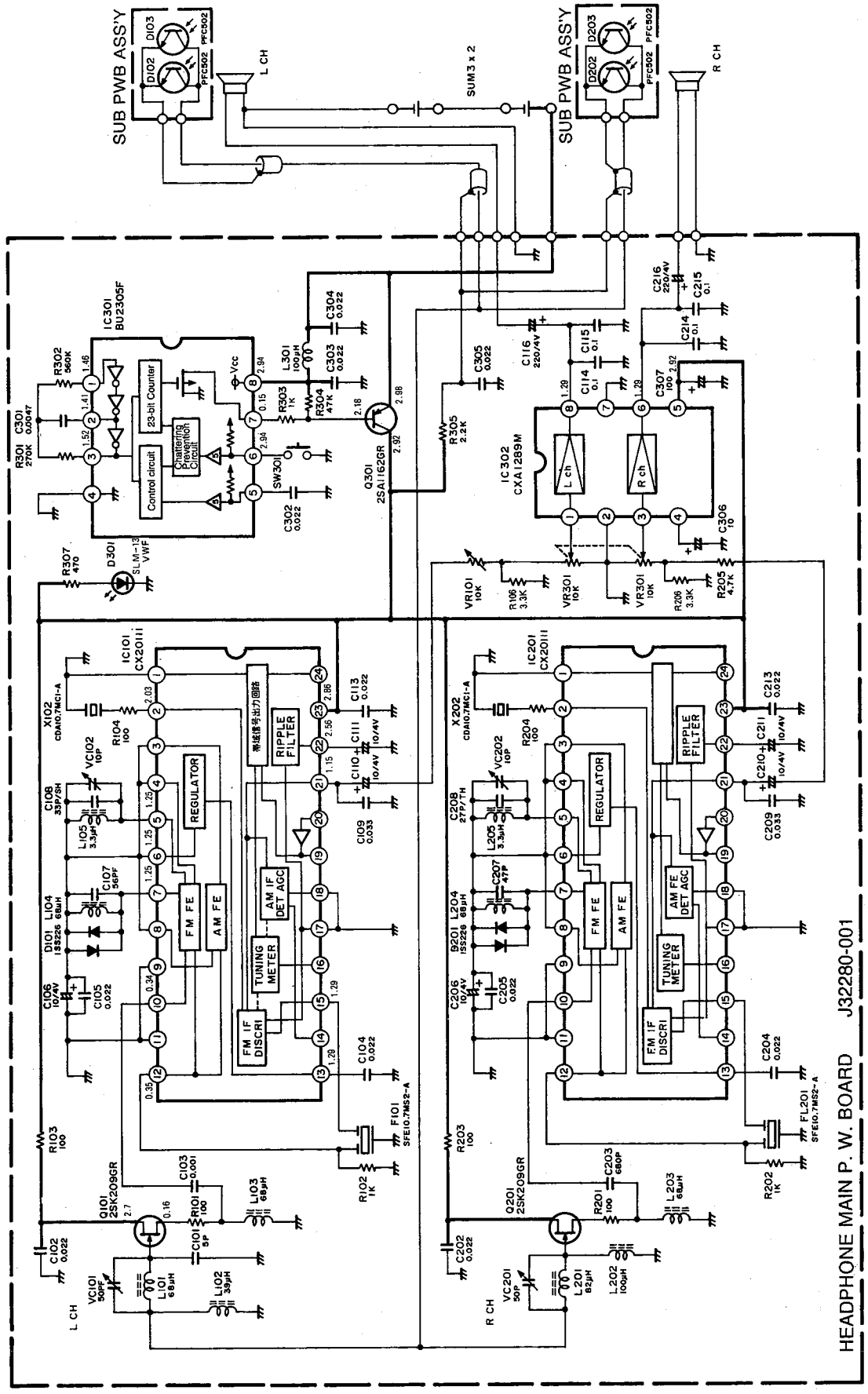
TOP



Backside Surface

HEADPHONE PWB CIRCUIT DIAGRAM

Refer to the following PWB pattern. : HEADPHONE PWB PATTERN page 2-35.



OPERATING INSTRUCTIONS

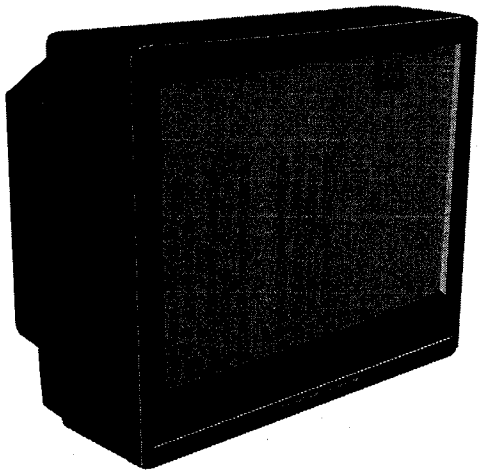
JVC

AV-27BX4 / AV-31BX4 / AV-35BH4

COLOR TELEVISION

USER GUIDE

Thank you for purchasing this JVC color television.
To ensure your complete understanding, please read this manual thoroughly before operation.



(The illustration above is of AV-31BX4)

PREPARATION (page 7)

1. Connecting Antenna and Power Cord
2. Inserting Batteries into Your Remote Control
3. Turning the Power On/Off
4. Presetting the Channels

BASIC OPERATING PROCEDURE (page 10)

Watching a Television Program
Self-demonstration Mode

SOUND AND PICTURE (page 12)

HANDY CHANNEL SELECTION (page 18)

TIMER OPERATION (page 21)

OTHER FEATURES (page 26)

CONNECTION (page 30)

TROUBLESHOOTING (page 38)

For Customer Use:

Enter below the Model No. and Serial No. which are located on the rear of the cabinet. Retain this information for future reference.

Model No. _____

Serial No. _____

SAFETY INSTRUCTIONS

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK)
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS TV SET TO RAIN OR MOISTURE.

Caution:
Changes or modifications not approved by JVC could void the warranty.

CAUTION: TO INSURE PERSONAL SAFETY, OBSERVE THE FOLLOWING RULES REGARDING THE USE OF THIS UNIT.

1. Operate only from the power source specified on the unit.
2. Avoid damaging the AC plug and power cord.
3. Avoid improper installation and never position the unit where good ventilation is unattainable.
4. Do not allow objects or liquid into the cabinet openings.
5. In the event of trouble, unplug the unit and call a service technician. Do not attempt to repair it yourself or remove the rear cover.

Caution:
When you don't use this TV set for a long period of time, be sure to disconnect both the power plug from the AC outlet and antenna for your safety.

IMPORTANT SAFEGUARDS

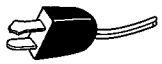
CAUTION: Please read and retain for your safety.

Electrical energy can perform many useful functions. This TV set has been engineered and manufactured to assure your personal safety. But *improper use can result in potential electrical shock or fire hazards.* In order not to defeat the safeguards incorporated in this TV set, observe the following basic rules for its installation, use and servicing. And also follow all warnings and instructions marked on your TV set.

INSTALLATION

1 Your TV set is equipped with a polarized AC line plug (one blade of the plug is wider than the other) or a grounding-type AC line plug (three-blade type).

(POLARIZED-TYPE)



This safety feature allows the plug to fit into the power outlet only one way. Should you be unable to insert the plug fully into the outlet, try reversing the plug.
Should it still fail to fit, contact your electrician.

(GROUNDING-TYPE)

Should you be unable to insert the plug into the outlet, contact your electrician. Do not defeat the safety purpose of the grounding-type plug.

2 Operate the TV set only from a power source as indicated on the TV set or refer to the operating instructions for this information. If you are not sure of the type of power supply to your home, consult your TV set dealer or local power company. For battery operation, refer to the operating instructions.

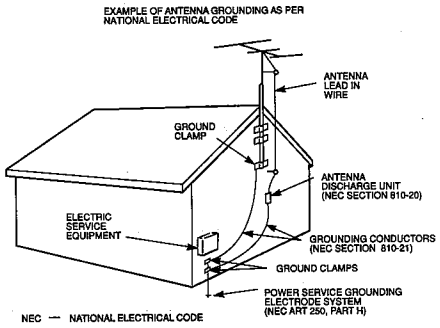
3 Overloaded AC outlets and extension cords are dangerous, and so are frayed power cords and broken plugs. They may result in a shock or fire hazard. Call your service technician for replacement.

4 Do not allow anything to rest on or roll over the power cord, and do not place the TV set where power cord is subject to traffic or abuse. This may result in a shock or fire hazard.

5 Do not use this TV set near water — for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near swimming pool, etc.

6 If an outside antenna is connected to the TV set, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection requirements for the grounding electrode.

7 An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.


EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE
ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)
NEC — NATIONAL ELECTRICAL CODE

8 TV sets are provided with ventilation openings in the cabinet to allow heat generated during operation to be released. If these openings are blocked, heat built-up within the TV set can cause failures which may result in a fire hazard. Therefore:

- Never block the bottom ventilation slots of a portable TV set by placing it on a bed, sofa, rug, etc.
- Never place a TV set in a "built-in" enclosure unless proper ventilation is provided.
- Never cover the openings with a cloth or other material.
- Never place the TV set near or over a radiator or heat register.

9 To avoid personal injury:

- Do not place a TV set on a sloping shelf unless properly secured.
- Use only a cart or stand recommended by the TV set manufacturer.
- Do not try to roll a cart with small casters across thresholds or deep pile carpets.
- Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

USE

10 Always turn the TV set off if it is necessary to leave the room for more than a short period of time. Never leave a TV set on when leaving the house. A possible malfunction may result in a fire hazard.

11 Caution children about dropping or pushing objects into the TV set through cabinet openings. Some internal parts carry hazardous voltages and contact can result in a fire or electrical shock.

12 Unplug the TV set from the wall outlet before cleaning the face of the picture tube. Use a slightly damp (not wet) cloth. Do not use an aerosol directly on the picture tube since it may over spray and cause electrical shock.

13 Never add accessories to a TV set that has not been designed for this purpose. Such additions may result in a shock hazard.

14 For added protection of the TV set during a lightning storm or when the TV set is to be left unattended for an extended period of time, unplug it from the wall outlet and disconnect the antenna. This will prevent possible shock and fire hazard due to lightning storms or power line surges.

15 A TV set and cart combination should be moved with care.
Quick stops, excessive force, and uneven surfaces may cause the TV set and cart combination to overturn.

SERVICE

16 Unplug this TV set from the wall outlet and refer servicing to qualified service personnel under the following conditions:

A. When the power cord or plug is damaged or frayed.
B. If liquid has been spilled into the TV set.
C. If the TV set has been exposed to rain or water.
D. If the TV set does not operate normally by following the operating instructions. Adjust only those controls that are covered in the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the TV set to normal operation.
E. If the TV set has been dropped or the cabinet has been damaged.
F. When the TV set exhibits a distinct change in performance — this indicates a need for service.
G. If snapping or popping from the TV set is continuous or frequent while the TV set is operating. It is normal for some TV sets to make occasional snapping or popping sounds, particularly when being turned on or off.

17 Do not attempt to service this TV set yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

18 When replacement parts are required, have the service technician verify in writing that the replacement parts he uses have the same safety characteristics as the original parts. Use of manufacturer's specified replacement parts can prevent fire, shock, or other hazards.

19 Upon completion of any service or repairs to this TV set, please ask the service technician to perform the safety check described in the manufacturer's service literature.

20 When a TV set reaches the end of its useful life, improper disposal could result in a picture tube implosion. Ask a qualified service technician to dispose of the TV set.

21 Note to CATV system installer.
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Contents

PREPARATION
1.Connecting Antenna and Power Cord 7
2.Inserting Batteries into Your Remote Control 7
3.Turning the Power On/Off 8
4.Presetting the Channels 8

BASIC OPERATING PROCEDURE
Watching a Television Program 10
Self-demonstration Mode 11

SOUND AND PICTURE
Two-Picture Screen 12
Picture and Sound Adjustments 14
Viewing CINEMA Programs 16
Listening to Stereo or Bilingual Broadcasts 16
Muting the Sound 17
Sound Mode with a "Being-There" Feeling 17

HANDY CHANNEL SELECTION
Learning Your Favorite Channels 18
Channel Selection According to Category 18
Returning to the Previous Channel 20
Scanning Through the Channels 20

TIMER OPERATION
Setting the Clock 21
Timer Operation for the Desired Programs 22
Turning the TV On/Off at a Set Time, Every Day 23
Sleep Timer Operation 24
Turning Off the TV at a Set Time, Every Day 24

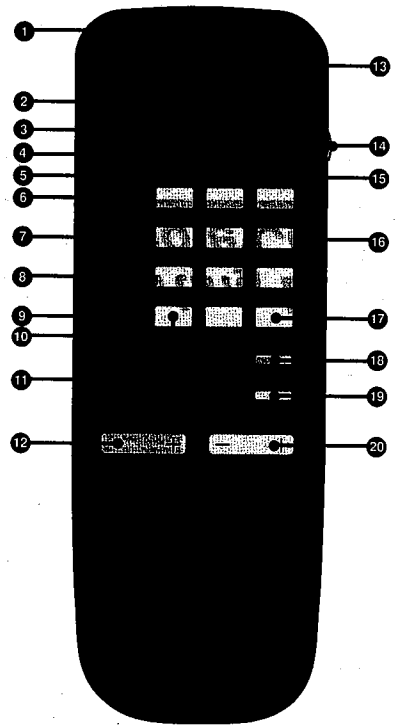
OTHER FEATURES
Displaying the Current TV Status 26
Automatic Volume Adjustment 26
Guarding a Channel 27
Viewing the Closed Captions 28
Turning Non-broadcasting Channels Blue 28
Showing the Spanish Menu 29
Eliminating the Menu Background 29

CONNECTION
Connecting External Devices 30
Listening to the Sound Through External Speakers 31
Switching to the Surround Speakers 31
Listening with the Cordless Headphones 32
Using the TV's Remote Control Unit to Operate the VCR and CATV Converter 34
AV COMPU LINK Connection 36

TROUBLESHOOTING
Troubleshooting 38

Specifications 41
HOW TO LOCATE YOUR JVC SERVICE CENTER 42
LIMITED WARRANTY 43

Locations of Remote Control Buttons



❶ CLOSED CAPTION button	p.28
❷ PIP buttons	p.12
❸ CORDLESS ON/OFF button	p.33
❹ DISPLAY button	p.26
❺ MAIN/SAP button	p.16
❻ MENU button	p.5
❼ LIVE EFFEX button	p.17
❽ CATEGORY PREVIEW button	p.18
❾ TV/VIDEO button	p.10
❿ RETURN button	p.20
⓫ FUNCTION (▼▲ – +) buttons	p.14
⓬ CHANNEL (–/+) button	p.11
⓭ POWER button	p.8
⓮ 3-way mode selector	p.34
⓯ ANT/CABLE button	p.10
⓰ Number keys	p.11
⓱ 100+ button	p.11
⓲ THEATER/AV STATUS button	p.15, 16
⓳ MUTE button	p.17
⓴ VOLUME (–/+) button	p.11

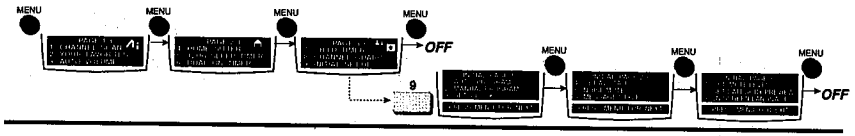
MENU Selection

Most of the TV's functions can be selected with the remote control unit.

1. Press MENU. The function list will appear.
2. Press the corresponding number key to select a function.
3. A function can be set on the screen.

Note :

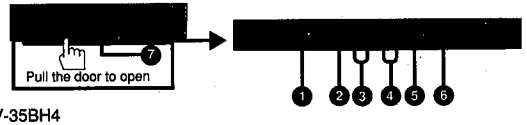
- When "9. INITIAL SET-UP" is selected, another function list will be displayed. Use the number keys to select a function.



Locations of TV Buttons and Parts

FRONT PANEL

AV-27BX4/AV-31BX4



AV-35BH4

❶	INPUT jacks	(page 30)
❷	FUNCTION button	(page 6)
❸	LEVEL/CHANNEL buttons	(page 11)
❹	VOLUME buttons	(page 11)
❺	POWER button	(page 8)
❻	POWER/ON TIMER lamp	(page 8, 22, 23)
❼	LED (for cordless headphones)	(page 32)

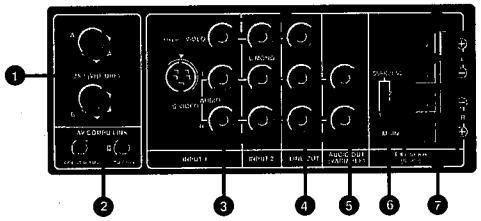
How to use the FUNCTION button:

- Press this button to display a list of functions. While the list is being displayed, press the button again to select the desired function; then change the level or setting with LEVEL/CHANNEL (–/+).
- Other buttons may be used by referring to the respective page of this user guide for their description.

Note:

- Illustrations for front panels and rear panels used in this user guide are of the AV-31BX4. The buttons and jacks of the other model follows the same layout, however the location of the POWER/ON TIMER lamp for AV-35BH4 is different.

REAR PANEL



❶	Antenna A, B	(page 7)
❷	AV COMPU LINK jacks	(page 36)
❸	INPUT (1, 2) jacks	(page 30)
❹	LINE OUT jacks	(page 30)
❺	AUDIO OUT (VARIABLE) jacks	(page 30)
❻	EXT SPKR switch	(page 31)
❼	EXT SPKR jacks	(page 30)

Notes (also see "CONNECTION" on pages 30 to 37):

AUDIO OUT (VARIABLE) jacks:
Outputs the sound of the picture appearing on theTV.

- The output sound level can be adjusted with VOLUME (–/+) on the TV.

LINE OUT jacks:
Output the sound and picture that is appearing on the TV.

- The picture that is input to the S-VIDEO jack of INPUT jacks on the rear panel is not output.
- If both the INPUT and LINE OUT jacks are connected to the same VCR, the screen becomes distorted except during playback of VCR.

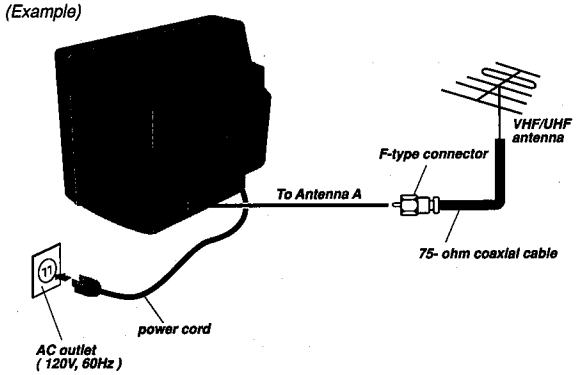
INPUT jacks:

- Audio output of monaural equipment is connected to INPUT 2 jack on the rear panel. Audio output is connected to L/MONO jack.
- Connect nothing to S-VIDEO jack, when using the VIDEO jack of INPUT 1 jack on the rear panel. Similarly, connect nothing to S-VIDEO jack, when using the INPUT jack on the front panel.
- The INPUT jack on the front panel and the INPUT 1 jack on the rear panel are bridge-connected. Do not input signals from both of them at the same time.

Antenna A, B: See Page 7.
EXT SPKR jacks: See page 30.

1. Connecting Antenna and Power Cord

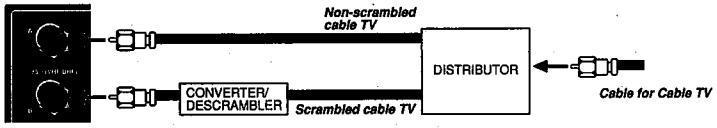
(Example)



Notes:

- When connecting both a cable (75-ohm coaxial) and a UHF antenna (300-ohm feeder), use an optional antenna mixer (CE41467) to make a single connection.
  With this antenna mixer, reception of cable channels higher than "Channel W+17" is not possible.
- The power cord is supplied with a polarized plug. Therefore, it will only insert one way into the wall outlet. DO NOT DEFEAT THE POLARIZED PLUG. If you have difficulty, consult your local dealer.
- Some cable companies require a converter box to receive all available programs. Others may require it for subscription or "premium" programming. Consult your local cable company for correct installation.

Rear panel

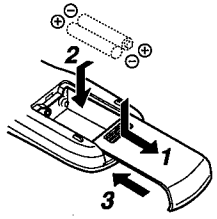


2. Inserting Batteries into Your Remote Control

1 Press down and slide off the cover.

2 Insert 2 batteries into the battery compartment.

3 Replace the cover.



Condition:

- Use two AA/R6 dry cell batteries.

Caution:

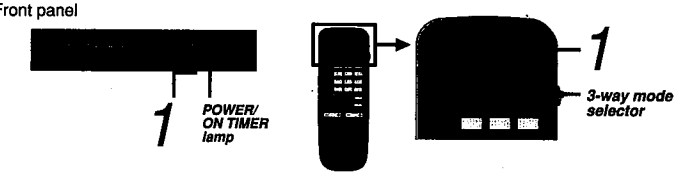
- Follow the cautions printed on the batteries.

Notes:

- Battery life is approximately 6 months to 1 year depending on the frequency of use.
- If the remote control operates erratically, replace the batteries.
- Insert batteries correctly observing + and – polarities.
- If a manufacturer's VCR or CATV converter code has been set, removal of the batteries returns the code to the setting at the time of shipment; re-enter the settings to be able to control this other equipment again (see page 34).

3. Turning the Power On/Off

Front panel



Condition:
- When controlling with the remote control, set the 3-way mode selector to TV.

1 Press POWER.

POWER

The POWER/ON TIMER lamp lights up.

POWER

- To turn Off the TV, press POWER once again.
  The POWER/ON TIMER lamp goes off.

4. Presetting the Channels

Preset the channels you want to watch. The preset channel can be selected with CHANNEL (–/+).

Setting all the channels which can be received —AUTO PROGRAM

1 Turn on the TV, and press MENU (3 times).

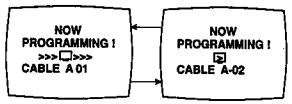
The menu (PAGE-3/3) appears.

2 Press 9.

The INITIAL menu (PAGE-1/3) appears.

3 Press 1.

Setting is done automatically.



Searching *Channel setting*

1. ***AUTO PROGRAM:***
   To set all the channels
2. ***MANUAL PROGRAM:***
   To set or delete one channel at a time

This completes the setting.

The on-screen display disappears in a few seconds.

Setting one channel at a time —MANUAL PROGRAM

1 Press MENU (3 times), 9, and 2.

The MANUAL PROGRAM menu appears.

Channels already set will have a dash

Notes:
- The comma between buttons signifies that the buttons are to be pressed consecutively, not simultaneously.
- See also the CABLE TV CHANNEL CONVERSION CHART on the back cover of this user guide.

2 Press 4 or 5 to change the channel to be set.

4:
The channel decreases by one.
5:
The channel increases by one.

To switch to the broadcast mode:
Press ANT/CABLE. Each time the button is pressed, it will switch between CHANNEL, CABLE A, and CABLE B.

3 Press 1 to add the channel.

Set other channels one at a time by repeating steps 2 and 3 above.

4 Complete the setting by pressing 3.

The menu disappears.

Deleting the channels set with AUTO PROGRAM

1. Display the channel to be deleted in step 2 of the above title "Setting one channels at a time".
2. Press 2 to delete that channel.
   Delete other channels by repeating steps 1 and 2 above.

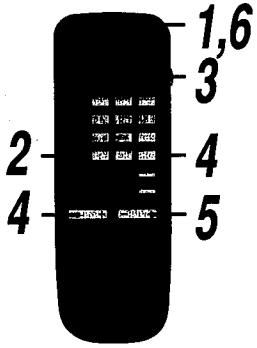
- Complete the setting by pressing 3. The menu disappears.

Note:
- Pressing CHANNEL (–/+) only selects channels set with AUTO PROGRAM or MANUAL PROGRAM.

(No.50796) 1-5

Watching a Television Program

Front panel



1 Press POWER.

POWER

The POWER/ON TIMER lamp lights up.

CHANNEL–02

2 If video mode (VIDEO-1, -2) has been selected, press TV/VIDEO repeatedly to switch it to CHANNEL.

TV/VIDEO

CHANNEL (CABLE A or CABLE B) → VIDEO-1 → VIDEO-2

CHANNEL–02

CHANNEL:
To view TV broadcast
CABLE will be displayed if you have turned off TV after watching cable TV broadcast.

VIDEO-1,2:
To view the video being input to an INPUT 1, 2 jacks (see page 30).

3 Press ANT/CABLE repeatedly to select the broadcast mode depending on the input source.

ANT/CABLE

CHANNEL → CABLE A → CABLE B

CHANNEL:
To view TV over the air broadcast.

CABLE A:
To view CABLE stations from Antenna A.

CABLE B:
To view CABLE stations from Antenna B.

4 Select a channel.

Scan selection

CHANNEL

1. Press CHANNEL (–/+).
   + : to scan UP a channel number.
   – : to scan DOWN a channel number.

Notes:
- Only a channel which has been preset can be selected (see page 8).
- This operation can also be done with LEVEL/CHANNEL (–/+) on the front panel.

Direct selection

1. Press a number key.
   Example: To select channel 5 (single-digit channel), press 0 and 5.
   Example: To select channel 35 (two-digit channel), press 3 and 5.
   Example: To select channel 115 (three-digit channel), press 100+,1 and 5.

Note:
- See also the CABLE TV CHANNEL CONVERSION CHART on the back cover of this user guide.

5 Press VOLUME (–/+).

The level indicator appears.

VOLUME

+ : The bars move right and the volume increases.
– : The bars move left and the volume decreases.

Note:
- This operation can also be done with VOLUME (–/+) on the front panel.

6 Press POWER to turn the power off.

POWER

The POWER/ON TIMER lamp goes off.

Note:
- The POWER/ON TIMER lamp glows faintly without turning off, while the DUAL ON TIMER or HOME SITTER is in operation (see pages 22 and 23).

Self-demonstration Mode —DEMONSTRATION

This TV can demonstrate the major functions on screen.

1. Press MENU and 0 (2 times).
(or press FUNCTION and VOLUME (–) on the TV simultaneously.)

The demonstration begins.

● To stop the demonstration, press any button.

Two-Picture Screen

—PIP

Two Screens (one large and one small) can be displayed at the same time. While viewing a playback picture from the VCR, you can also enjoy the TV broadcast.

Conditions:
- Connect the playback device (VCR, etc). (See page 30.)
- The sound from the PIP picture can only be heard by using cordless headphones. (See page 32.)

PIP:
Picture In Picture

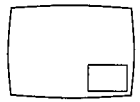
Note:
- Both the main screen and the PIP picture must be in the same broadcast mode (CHANNEL, CABLE A or CABLE B).

Displaying the PIP picture

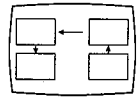
—ON/OFF button

1. Press the ON/OFF.

The PIP picture appears.



2. Pressing ON/OFF again changes the position of the PIP picture.



3. To remove the PIP picture, press ON/OFF while the PIP picture appears at the left/bottom side.

Switching the PIP Picture Input

—SOURCE button

1. Press SOURCE repeatedly to select the desired input.

TV mode → VIDEO-1 → VIDEO-2

TV mode:
To view TV broadcast or cable TV broadcast. Channel number is displayed on the screen.

VIDEO 1 , 2:
To view the video being input to an INPUT 1, 2 jacks. V-1, V-2 is displayed on the screen.

Still PIP picture

—FREEZE button

1. Press FREEZE.

The PIP picture pauses.

Note:
- If FREEZE is pressed while there is no PIP picture, the PIP picture will appear and then pause.

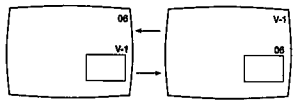
2. Pressing FREEZE once again restores the regular picture.

Swapping between the MAIN picture and the PIP picture

—SWAP button

1. Press SWAP.

The MAIN picture and PIP picture swap their places.

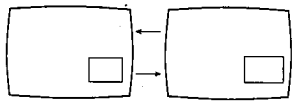


Changing the size of PIP picture

—SIZE button

1. Press SIZE.

The size of PIP picture changes.



Picture and Sound Adjustments

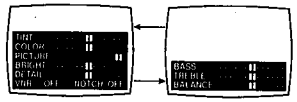
Since the ideal picture and sound differ according to the program and the room brightness, you may need to adjust the picture and sound to suit the current conditions.

1. Press ▼.

The Picture/Sound Adjustment menu appears.

Resetting Picture/Sound adjustments to factory settings:
1. Press THEATER/AV STATUS.
2. Press 4.

2. Press ▼ or ▲ to select an item, then press – or + to set the level.



Note:
- Pressing ▼ while at NOTCH position displays the Sound Adjusting menu. Pressing ▼ while at BALANCE position displays the Picture Adjusting menu.

Item	FUNCTION (–) button	FUNCTION (+ button)
TINT	Reddish	Greenish
COLOR	Subdued	Vivid
PICTURE	Light	Strong
BRIGHT	Dark	Bright
DETAIL	Soft	Sharp
VNR	toggles between ON/OFF	
NOTCH	toggles between ON/OFF	
BASS	Soft	Strong
TREBLE	Soft	Strong
BALANCE	Left	Right

VNR:
Video Noise Reduction
ON:
Set to this when the picture has noise.
OFF:
Set to this for a normal picture.

NOTCH:
ON:
When a dotted pattern appears at the border line of colors, and when the lines appear ragged.
OFF:
While watching a normal screen.

● This completes the setting. The menu disappears in a few seconds.

Memorizing the adjusted picture/sound settings —AV STATUS

Up to 2 adjusted settings for picture/sound can be memorized. The adjusted settings can be easily recalled, so that picture and sound settings can be switched over to enhance the program being watched.

Note:
- In THEATER STATUS mode, the pictures softness and depth cannot be stored.

1. Press MENU (3 times), 9, MENU, 4.

The AV STATUS menu is displayed.

2. Press ▼ or ▲ to select an item, then press – or + to set the level.

Note:
- Pressing 1 switches the display between the Picture and Sound Adjustment menus.

3. Press 2.

4. Press 1 or 2.

● The Picture/Sound Adjustment menu is displayed for you to check, it disappears in a few seconds.

1:
To memorize in AV STATUS A

2:
To memorize in AV STATUS B

Recalling the Stored Picture and Sound Settings

1. Press THEATER/AV STATUS.

The RECALL THEATER/AV STATUS menu is displayed.

2. Press 2 or 3.

● After the Picture/Sound Adjustment menu is displayed for you to check, it disappears in a few seconds.

Note:
- When recalling the stored picture and sound settings, these settings are automatically applied to the picture and sound adjustments.

2:
To recall the setting in AV STATUS A

3:
To recall the setting in AV STATUS B

Viewing CINEMA Programs

—THEATER STATUS

The picture in the THEATER STATUS mode can have softness and depth. Darken the room when viewing programs to get the best effect.

Note:
- In THEATER STATUS mode, the sliding scales of TINT, COLOR, PICTURE, and BRIGHT are set at the center.

1. Press THEATER/AV STATUS.

The RECALL THEATER/AV STATUS menu is displayed.

2. Press 1 and select THEATER STATUS.

4. RESET:
THEATER STATUS mode is canceled, and Picture/Sound adjustments are reset to the factory setting.

This completes the setting.

The Picture/Sound Adjustment menu is displayed for you to check, it disappears in a few seconds.

Listening to Stereo or Bilingual Broadcasts

—MTS

You can enjoy music and sports programs in stereo as well as listen to bilingual broadcasts in either language.

MTS:
Multichannel Television Sound

Notes:
- MTS has no effect on normal sound broadcasts.
- MTS may not function normally while you are watching cable TV.

1. Select the sound by pressing MAIN/SAP.

"←ON AIR" is displayed opposite the sound type in use for the current program.

STEREO:
Stereo audio program

SAP:
Second Audio Program

MONO:
Monaural audio program

This completes the setting.

The menu disappears in a few seconds.

Muting the Sound

—MUTE

You can mute the volume completely (to 0) or to a preset level. Muting is convenient when you answer the phone or when someone suddenly visits.

1. Press MUTE.

- Pressing it again restores the regular volume.

Notes :
- If the program sound level is already lower than the preset mute level, pressing MUTE sets the sound to '0'.
- Muting can also be cancelled by pressing VOLUME (–/+).

To preset the mute level

1. Press MENU (3 times), 9, MENU (2 times), and 7.

2. Press VOLUME (–/+) to adjust the mute level.

- Pressing 1 completes the presetting. The on-screen display disappears in a few seconds.

Sound Mode with a "Being-There" Feeling

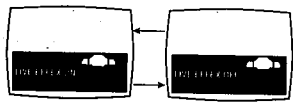
—LIVE EFFEX

You can enjoy the acoustic atmosphere of a theater or sports arena.

Condition :
- LIVE EFFEX only works on stereo sound.

1. Press LIVE EFFEX to alternate the ON/OFF status.

- This completes the setting. The on-screen display disappears in a few seconds.



Learning Your Favorite Channels
—YOUR FAVORITES

This TV automatically memorizes the channel being received. After watching at least 3 different channels, the 3 most frequently watched channels can be displayed, and the one you want can be selected from this list.

Condition:
- The buit-in clock must be set. (See page 21.)

Note :
- Two sets of your favorite channels are stored for each time period: DAYTIME or EVENING.
  DAYTIME : 4:00 am to 5.59 pm
  EVENING : 6:00 pm to 3:59 am

1. Press MENU, and 2.

The Your Favorites menu is displayed.

(Sample of channel ranking)

Notes:
- Each of the 3 channels are shown for a few seconds. The channel number (or station ID. see page 19) of the channel shown will blink.
- The current time band (DAYTIME or EVENING) will be displayed in the brackets.

2. Select a channel by pressing 1 or 2 or 3.

- The channel changes to the one you have selected, and the menu automatically disappears.

Channel Selection According to Category
—CATEGORY PREVIEW

In this TV, 5 respective channels can be stored in each of the following 5 categories (NETWORK, MOVIES, SPORTS, NEWS, CHOICE). The channels set under a category can be selected directly from the display.

Setting Procedure

1. Press MENU (3 times), 9, MENU (2 times), and 8.

The Category Preview menu is displayed.

2. Press a number (from 1 to 5) to select the desired category.

3. Press a number key (from 1 to 5) to select the position.

To delete already set channels:
1. Select the channel to be deleted in step 3.
2. Press 0,0.

4. Press ANT/CABLE if necessary to select the broadcast mode, then use the number keys and/or 100+ to select the channel to be set.

Note:
- A channel which has been set in CHANNEL GUARD cannot be set (see page 27).

5. Press ▼ or ▲ and the – or + to set the station ID.

▼ ▲:
To select a character (A to Z, Ñ, 9, Ü, ¿, |, 0 to 9, punctuation marks)
– +:
To move the cursor
Note:
- Station ID is displayed when the channel is changed or when Your Favorites is used.

6. Press 1.

Complete the setting by pressing any button other than 1 or 2.

The menu disappears.

To continue setting other channels:
Press 1 or 2.

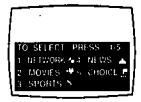
1:
To set in the same category. The process returns to step 3.

2:
To set in a different category. The process returns to step 2.

Selecting a set channel

1. Press CATEGORY PREVIEW.

The 5 Categories are displayed.



2. Press a number key (from 1 to 5) to select the desired category.

A list of channels is displayed.

Note:
- Each set channel appears for few seconds. The channel number (or station ID) of the channel shown will blink.

3. Press a number key (from 1 to 5) to select the desired channel.

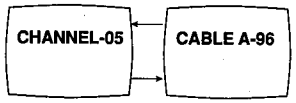
- The channel changes and the channel list disappears automatically.

Returning to the Previous Channel
—CHANNEL RETURN

You can return to the previous channel quickly and simply. For example, if you are watching a football game, but want to check the news during time outs and commercials, just tune in the football channel then use the number keys to change to the news channel. Now with RETURN you can jump from one to the other and back again quickly and simply.

1. Press RETURN.

Channels alternate between the previous channel and original channel.



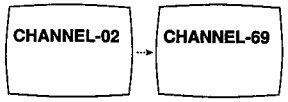
Scanning Through the Channels
—CHANNEL SCAN

All programs being broadcast appear for a few seconds each in sequence, and the scanning stops at the original channel. In this way, a channel can be selected while watching the programs being broadcast.

Notes :
- Only the preset channels are displayed (see page 8).
- To switch over while in broadcast mode (CHANNEL, CABLE A, CABLE B), press ANT/CABLE.

1. Press MENU, and 1.

The channels change automatically.



2. Press any button on the remote control unit.

Channel scanning stops, the displayed channel is selected, and "SCAN STOP" appears for a few seconds.

Note :
- At the end of channel scanning, "SCAN STOP" is displayed for a few seconds.

Setting the Clock
—SET CLOCK

Your TV has a built-in clock which keeps and displays the current time on the screen. The timer functions won't work, and cannot be set, if this clock stops.

Notes :
- If there is a power interruption, the clock will stop. However, if the power interruption lasts only a few minutes, the clock will be slow by the number of minutes when the power cut off. In these cases, you need to set the clock again.
- The time is given in 12-hour format.

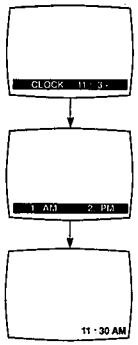
1. Press MENU (3 times), 9 or 3.

The Set Clock menu appears.

2. Use the number keys to set the current time.

Example: To set 11: 30 AM
1. Press 1, 1, 3, 0.
2. Press 1.

● The clock will start. The clock display disappears in a few seconds.



1. AM: To set the morning time.
2. PM: To set the afternoon and evening time.

If a timer function is selected without setting the clock.

The menu on the right appears.

Pressing 1 displays the Set Clock menu. Set the clock. Once the clock is set, the display returns to timer setting mode and you are able to set the timer.

Pressing 2 ends the timer setting mode, and a message appears telling you that the timer cannot be set.

(No.50796) 1-11

Timer Operation for the Desired Programs

—DUAL ON TIMER

Your TV turns on at the set time, and the channel changes to the one you have set. Up to 2 programs can be set.

Condition :
- The built-in clock must be set. (See page 21.)

1. Press MENU (2 times), and 6.

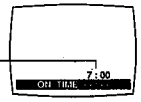
The DUAL ON TIMER menu appears.

2. Press 1 or 2.

1:
DUAL ON TIMER 1

2:
DUAL ON TIMER 2

3. Press 3.



1. SET:
For restarting the deactivated timer. ("YES" will be displayed in the brackets, and the ON TIMER lamp will light up.)
2. CANCEL:
For canceling the timer. ("NO" will be displayed in the brackets, and the ON TIMER lamp will go off.)
3. CHANGE:
For setting the timer or changing the timer setting.

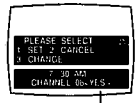
4. Press the number keys to enter the scheduled time.

Example: To schedule the TV to come on at 7:30 AM
Press 0, 7, 3, 0, and then press 1.

Note:
- If the time to be set is the same as the last one you have set, press ▼ to advance to step 5.

1. AM: To set the time for the morning.
2. PM: To set the time for the afternoon and evening.

5. Press ANT CABLE if necessary to select the broadcast mode, then use the number keys and/or 100+ to select the channel to be set.



"YES" will be displayed in the brackets

Notes:
- If the channel to be set is the same as the last one you have set, press ▼ to complete the setting.
- To change the ON time, press ▲ to return to step 4.
- The DUAL ON TIMER cannot be set for channels set under CHANNEL GUARD (see page 27).

This completes the setting.

The on-screen display disappears in a few seconds.
- When the TV is turned off, the POWER/ON TIMER lamp lights up dimly.

Notes:
- Once the DUAL ON TIMER operates its setting will be canceled.
- If there is a power interruption, the DUAL ON TIMER will be canceled.
- If no operation is done within two hours after the TV turns on by the DUAL ON TIMER, the TV will turn off automatically.
- If the clock is not working, the DUAL ON TIMER cannot be set.

Turning the TV On/Off at a Set Time, Every Day

—HOME SITTER

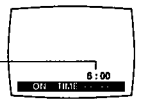
You can turn on the TV to a set channel at a set time, and then turn it off at a set time. This function is convenient for controlling the time when the television is available for viewing or for giving a vacant house a lived-in look.

Condition :
- The built-in clock must be set. (See page 21.)

1. Press MENU (2 times), and 4.

The HOME SITTER menu is displayed.

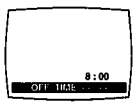
2. Press 3.



1. SET:
For restarting the deactivated timer. ("YES" will be displayed in the brackets, and the ON TIMER lamp will light up.)
2. CANCEL:
For canceling the timer. ("NO" will be displayed in the brackets, and the ON TIMER lamp will go off.)
3. CHANGE:
For setting the timer or changing the timer setting.

3. Press the number keys to enter the time for the TV to turn on.

Example: To enter 8:15 AM
Press 0, 8, 1, 5, and then press 1.



Note:
- If the time to be set is the same as the last one you have set, press ▼ to advance to step 4.

1. AM: To set the time for the morning.
2. PM: To set the time for the afternoon and evening.

4. Press the number keys to enter the time for the TV to turn off.

Example: To enter 10:30 AM
Press 1, 0, 3, 0, and then press 1.

Notes:
- If the time to be set is the same as the last one you have set, press ▼ to advance to step 5.
- To change the ON time, press ▲ to return to step 3.

5. Press ANT/CABLE if necessary to select the broadcast mode, then use the number keys and/or 100+ to select the channel to be set.

"YES" will be displayed in the brackets

Notes:
- If the channel to be set is the same as the last one you have set, press ▼ to complete the setting.
- To change the OFF time, press ▲ to return to step 4.
- The HOME SITTER cannot be set for channels set under CHANNEL GUARD (see page 27).

This completes the setting.

The on-screen display disappears in a few seconds.
- When the TV is turned off, the POWER/ON TIMER lamp lights up dimly.

Notes:
- If there is a power interruption, the HOME SITTER setting will be canceled.
- If the clock is not working, the HOME SITTER cannot be set.

Sleep Timer Operation

—12HR SLEEP TIMER

The TV can be set to turn off automatically at a set time, after you fall asleep while watching it.

Condition:
- The built-in clock must be set. (See page 21.)

1. Press MENU (2 times), and 5.

The 12-hour Sleep Timer menu is displayed.

2. Press the number keys to enter the time for the TV to turn off.

Example: To enter 11:30
Press 1,1,3,0.

This completes the setting.

The sleep time display disappears in a few seconds.

Notes:
- Once the SLEEP TIMER operates, its setting will be canceled.
- If the TV is turned off or if there is a power interruption, the SLEEP TIMER will be canceled.
- The SLEEP TIMER can be set to turn off up to 11 hours and 59 minutes after the current time.
- If the clock is not working, the SLEEP TIMER cannot be set.
- One minute before the TV is set to turn off, the display below will appear for a few seconds. Pressing ▼ while the display appears will extend the setting by 15 minutes.

Turning Off the TV at a Set time, Every Day

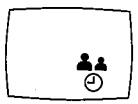
—CHILD TIMER

Your TV can be turned off at a set time, every day. No picture will appear for 1 hour after it has turned off, unless a correct ID number is entered. This timer is useful for controlling the TV viewing time for children.

Condition:
- The built-in clock must be set. (See page 21.)

1. Press MENU (3 times), and 7.

The CHILD TIMER symbol is displayed.



2. Press 0 before the symbol disappears.

The CHILD TIMER menu is displayed.

Notes:
- If there is a power interruption, the CHILD TIMER will be canceled.
- If the clock is not working, the CHILD TIMER cannot be set.

3. Press 3.

Current setting

4. Press the number keys to enter the time you want the TV to turn off.

Example: To enter 9:00 AM
Press 0, 9, 0, 0, and then press 1.

- This completes the setting. The on-screen display disappears in a few seconds.

"YES" will be displayed in the brackets.

1. SET:
For restarting the deactivated timer. ("YES" will be displayed in the brackets)
2. CANCEL:
For canceling the timer.("NO" will be displayed in the brackets)
3. CHANGE:
For setting the timer or changing the timer setting.
4. ID NO.:
For setting the ID number.

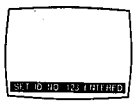
1. AM: To set the time for the morning.
2. PM: To set the time for the afternoon and evening.

Setting the ID number

1. Press 4 in step 3 above.

2. Press the number keys to enter any 3-digit value.

- This completes the setting. The on-screen display disappears in a few seconds.



Notes:
- As shipped from the factory and after a power interruption, the ID number will be "000". If this is acceptable as the ID number, the ID number need not be set.
- The ID number is the same one as the CHANNEL GUARD ID number (see page 27).

Watching the TV within 1 hour after it has been turned off by CHILD TIMER

1. Press POWER.

No picture appears, even when the power is turned on.

Blue background

2. Press the number keys to enter the ID number

The on-screen display disappears and a picture appears on the screen.

If the wrong ID number is entered:
"INVALID ID NO." will be displayed and the blue background will remain.

If the ID number has been forgotten:
Cancel the CHILD TIMER setting.

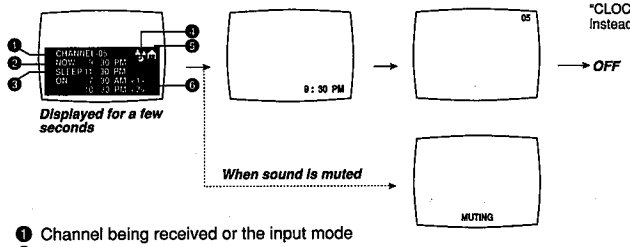
(No.50796) 1-13

AV-35BH4

Displaying the Current TV Status
—DISPLAY MESSAGES

You can display the timer settings, current time, and channel number.

1. Press DISPLAY repeatedly.



Note:
- While the clock is not working, "CLOCK NOT SET" is displayed instead of the current time.

❶ Channel being received or the input mode
❷ Current time
❸ Set status of the 12HR SLEEP TIMER
❹ Appears when the CHILD TIMER is operating
❺ Appears when the HOME SITTER is operating
❻ Set status of the DUAL ON TIMER

Automatic Volume Adjustment
—AUTO VOLUME

The TV learns how loud you like to play the set at different times during the day or night, and automatically controls the volume.

Condition :
- The built-in clock must be set. (See page 21.)
- This function does not work for the first 5 days after setting the clock. (It is learning how lond you play the set.)

1. Press MENU and 3.

The Auto Volume menu is displayed. The current setting appears inside the brackets.

2. Press 1 or 2.

- This completes the setting. The menu disappears in a few seconds.

Notes:
- This function does not take effect for the first 30 minutes after pressing VOLUME (–/+).
- Sound level is adjusted within +/- 5 range.

1:
For setting Auto Volume.
"AUTO" is added to the menu which appears upon operating VOLUME (–/+).

2:
For not setting Auto Volume.

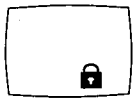
Guarding a Channel
—CHANNEL GUARD

A channel which has been set in channel guard cannot be watched unless an ID number is entered. You can restrict access to up to 3 channels with channel guard.

Condition:
- Tune the channel you want to guard.

1. Press MENU (3 times), and 8.

The lock symbol appears.



2. Press 0 before the lock symbol disappears.

The CHANNEL GUARD menu is displayed.

3. Press 1.

4. Select a position by pressing 1 or 2 or 3.

- This completes the setting. The menu disappears in a few seconds.

Notes:
- The ID number will be the same for all functions. The ID number is "000" when the TV is shipped from factory or after a power interruption.
- A guarded channel cannot be assigned to CATEGORY PREVIEW, DUAL ON TIMER, or HOME SITTER. However, if a channel has been assigned to one of these functions, it can be viewed without entering the ID number.

1. SET:
To set the channel guard.
2. CANCEL:
To cancel the channel guard.
3. SET ID NO.:
To set the ID number.
This ID number is the same as that of CHILD TIMER. If the ID number of CHILD TIMER has been set, it need not be set here (for the method of setting, see page 25).

Watching a Guarded Channel

1. Press the number keys to select the channel number.

The on-screen display appears requesting your ID number, and the channel changes.

2. Press the number keys to enter the ID number.

The menu disappears in a few seconds.

Note:
- A channel which has been set in channel guard cannot be selected with CHANNEL (–/+).

If the wrong ID number is entered:
"INVALID ID NO." is displayed and the channel remains unchanged.

If the ID number has been forgotton:
Reset another ID number.

Viewing the Closed Captions —CLOSED CAPTION

You can watch the closed captions of a TV broadcast, a video tape or a video disc.

Condition:
- Tune the TV to a program or video source which contains a closed caption.

1. Press CLOSED CAPTION repeatedly.

CLOSED CAPTION → TEXT → OFF

- The setting is completed and the on-screen display disappears in a few seconds.

Switching the data channels

1. Press C1/C2 after completing step 1.

C1 ⇄ C2

- The setting is completed and the on-screen display disappears in a few seconds.

Note:
- The closed caption may not be correctly displayed for cable TV or a video source with copy guard.

CLOSED CAPTION:
To view the caption
TEXT:
To view teletext
(If a black background appears while watching video tapes and discs without closed caption, set this function to OFF).
OFF:
Not to display either one

Notes:
- In CLOSED CAPTION mode, the clock display and MUTING indication are displayed in the upper corners.
- In TEXT mode, all displays disappear in a few seconds.

C1:
To display No.1 data channel

C2:
To display No.2 data channel

Turning Non-broadcasting Channels Blue —NOISE MUTE

You can turn the picture noise, which appears for channels not receiving broadcast signals, into a quiet solid blue screen.

1. Press MENU (3 times), 9, MENU, and 5.

The Noise Mute menu is displayed. The current setting appears inside the brackets.

2. Press 1 or 2.

- This completes the setting. The menu disappears in a few seconds.

1. ON:
To set Noise Mute

2. OFF:
Not to set Noise Mute

Showing the Spanish Menu — ON-SCREEN LANGUAGE

Most of the functions of this TV are selected while watching the menus. You can change the language of the menus into Spanish.

1. Press MENU (3 times), 9, MENU (2 times), and 9.

The ON-SCREEN LANGUAGE menu is displayed.

2. Press 1 or 2.

- This completes the setting. The menu disappears in a few seconds.

1:
To set menu language to English

2:
To set menu language to Spanish

Eliminating the Menu Background —MESSAGE STYLE

You can add or remove a background for the menu and on-screen display as you choose.

1. Press MENU (3 times), 9, MENU, and 6.

The Background menu is displayed.

2. Press 1 or 2.

- This completes the setting. The menu disappears in a few seconds.

1:
For adding the background

2:
For removing the background

(No.50796) 1-15

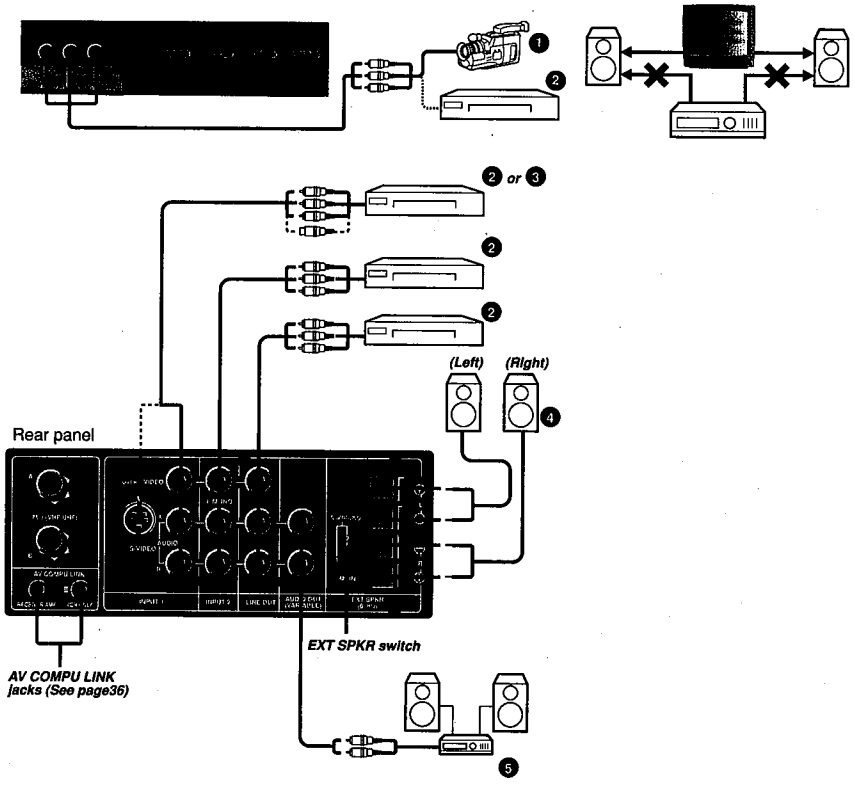
Connecting External Devices
—CONNECTION DIAGRAM

Conditions:
- Before connecting external devices, be sure to disconnect the TV from the AC outlet.
- When you want to view from a connected device such as a VCR, change the TV input mode with TV/VIDEO. (See step 2 on page 10.)

❶ Video movie
❷ VCR
❸ S-VHS VCR
❹ External speakers
❺ Audio component

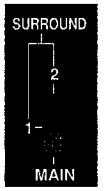
Notes:
- Refer to the "Note" on page 6 and to the manuals provided with the other devices.
- Interference from connected devices may cause the picture quality to deteriorate. If picture noise occurs, turn off devices that you are not using or move them further apart.
- Connect the video signal of S-VHS VCR to S-VIDEO jack.
- Do not connect the audio output of any other device to the speakers connected to this TV. It may damage the TV or the other devices.

Front panel



Listening to the Sound Through External Speakers
—OUTPUT SPEAKERS

1. Set the EXT SPKR switch to MAIN.



Setting the EXT SPKR switch:
The output sound differs depending on the switch setting.

Switch setting	Sound output	
	Built-in speakers	Speakers connected to the EXT SPKR jacks
MAIN	No sound	Normal sound
SURROUND 1	No sound	Surround effect sound
SURROUND 2	Normal sound	Surround effect sound

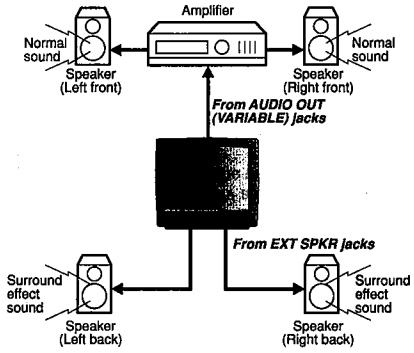
Switching to the Surround Speakers
—SURROUND

Surround effect is produced by the rear side left/right external speakers. You can enjoy stereoscopic live sound.

Conditions:
- The effect is produced only from stereo sound. If the sound source is monaural, no sound will come from the external speakers.
- Adjust the balance of sound to the center. (See page 14.)

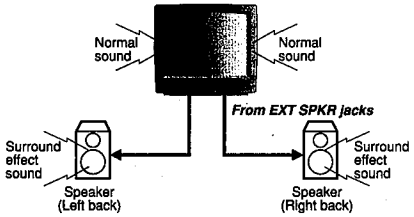
When an audio component is connected

Set the EXT SPKR switch to "SURROUND 1"



When an audio component is not connected

Set the EXT SPKR switch to "SURROUND 2"

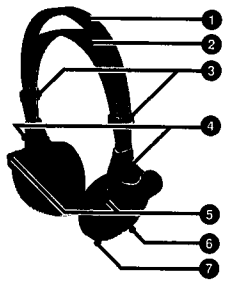


Listening with the Cordless Headphones

—CORDLESS HEADPHONES

You can listen to the TV sound with the accompanying cordless headphones. You can also listen to the sound of the PIP picture. In this way, 2 people can enjoy different pictures at the same time.

Locations of cordless headphones components

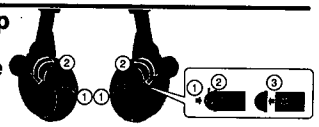


❶ Head band
❷ Head pad
❸ Slider (to adjust the length of head pad)
❹ Light receiver
❺ Battery cap
❻ POWER button, POWER lamp
❼ VOLUME control

Notes:
- This cordless headphones employs infrared light. So, use it observing the following points of caution.
  - Since the cordless headphones may be affected by the infrared light in sunlight, avoid using them under direct sunlight.
  - Obstacles between the light emitter and light receiver may make normal operation impossible. Keep the light emitter always visible from the light receiver, and do not cover the light receiver with hands or hair.
  - Noise may be generated if the illumination is bright and there are white walls and furniture. At such times, bring the headphones close to the light emitter.
- As soon as the 8 cordless headphone LEDs on the TV light up, you can use the cordless headphones. It is normal for the brightness of each LED to be different.

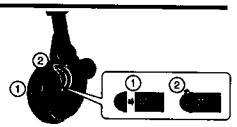
Loading batteries into the cordless headphones (both left/right sides)

1. Open the battery cap by pressing and turning it toward the OPEN direction.



2. Load battery cells.

3. Replace the battery cap at the OPEN position, and then turn it toward LOCK position.



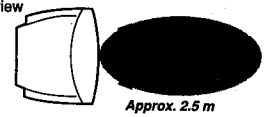
Condition:
Use two AA/R6 dry cell batteries.

Cautions:
- DO NOT use rechargeable batteries.
- Follow the cautions printed on the batteries.

Notes:
- Lifespan of the batteries is about 45 hour, although it may differ slightly with their type of use.
- Replace the batteries when no sound is heard or when the sound becomes distorted.
- Insert batteries correctly observing + and – polarities.

Use the cordless headphones within the range shown below.

Top view



Approx. 9 m (Maximum listening range directly in front)

Approx. 2.5 m

Note:
- Listening range will vary depending on the room size and layout.

Turning On/Off the cordless headphones, and adjusting the sound level

1. Press POWER to turn on the cordless headphones.

The POWER lamp lights up.

POWER lamp
POWER button

2. Adjust the sound level with the VOLUME control.

VOLUME control

3. After use, turn off the cordless headphones by pressing POWER.

The POWER lamp goes off.

Note:
- To prevent the headphones from accidentally remaining on, their power supply is designed to turn off automatically 3 hours after it is turned on. If the headphones turn off during use, press the POWER button to turn them on again.

Note:
- Avoid listening at high volume, as it may affect your hearing.

Selecting the sound source for the cordless headphones

You can select the sound from either the main picture or PIP picture ,as well as turn off the sound completely (the infrared light emitter is then also off).

1. Press the CORDLESS ON/OFF button, to select the desired sound.

This completes the setting.

The menu disappears in a few seconds.

Notes:
- The speakers always produce the sound from the main picture.
- To cut off the sound from the speakers, adjust the sound level to "0" with VOLUME (–/+).

MAIN:
To listen to the sound from the main picture.

MAIN/PIP:
To listen to the sound from the PIP picture (the sound from the main picture is produced if the PIP picture is not displayed).

OFF:
No sound comes from the cordless headphones (the TV's LED remains off).

(No.50796) 1-17

Using the TV's Remote Control Unit to Operate the VCR and CATV Converter

—3-WAY MODE SELECTOR

The remote control unit can be used to operate a VCR and a CATV converter.

Condition:
- Enter the code of the VCR and CATV converter manufacturer into the remote control unit.

1. Set the 3-way mode selector to VCR or CATV.

VCR-controllable buttons:

CHANNEL (–/+)
PAUSE (ANT/CABLE)
STOP (MAIN/SAP)
REC (DISPLAY)
(press simultaneously with PLAY)
REW (SOURCE)
PLAY (SWAP)
FF (SIZE)
POWER
Number keys

CATV converter-controllable buttons:

POWER
MENU
Number keys
CHANNEL (–/+)
RETURN (Functions as an ENTER key when a ZENITH CATV converter is used.)

Notes:
- Upon factory shipment, the remote control unit has been set to operate a JVC VCR and OAK CATV converter.
- When the batteries are replaced, the manufacture's code is reset to the factory setting.

VCR:
Allows the remote control unit to operate the VCR.

CATV:
Allows the remote control unit to operate the CATV converter.

Note:
- Depending on the VCR or CATV converter, a few buttons may not work.

Setting the Manufacturer's Code

1. The table on the right-hand page shows the manufacturer's codes for the VCR and CATV converter.

Note:
- In the manufacturer's code table, if a manufacturer has multiple manufacturer's codes, set and try each one until you find the one that works.

2. Set 3-way mode selector to VCR or CATV.

VCR:
For setting the VCR manufacturer's code.

CATV:
For setting the CATV converter's manufacturer's code.

3. While pressing MENU, press the number keys to enter the manufacturer's code (two-digit number).

● When the MENU button is released, the setting is completed. Test the remote control operation.

Note:
- It is necessary to enter the tens-digit even though the tens-digit is 0. Press 0 for the tens-digit in this case.

Manufacturer's Code Table

VCR

Manufacturer	Manufacturer's Code	Manufacturer	Manufacturer's Code
AKAI	24 26 27	PHILIPS	08 09 39
BROKSONIC	32	PIONEER	22
CANON	08	QUASAR	08
CITIZEN	18	RCA	09 22 35 38
CURTIS-MATHES	08 35	REALISTIC	08 17 20 33
EMERSON	05 15 16 30 31 32 34	SAMSUNG	25 38
FISHER	19 20 21	SANYO	17 20
FUNAI	33	SCOTT	03 05 11 30
GENERAL ELECTRIC	08 35 38	SEARS	17 18 19 21 22
GOLDSTAR	09	SHARP	36 37
HITACHI	22	SHINTOM	29
JVC	01 02	SONY BETA	10 12
J.C.PENNEY	08 22 23	SONY SUPER VHS	11 12 13
KENWOOD	02	SYLVANIA	08 09 39 41
MAGNAVOX	08 39	SYMPHONIC	33
MARTA	18	TASHIKO	18
MARANTZ	23	TEAC	33
MITSUBISHI/MGA	03 04 05 06 07	TEKNIKA	28
MONTGOMERY WARD	36	TOSHIBA	14 22
NEC	01 02 17 23	VECTOR RESEARCH	23
PANASONIC	08	WARDS	36 37
PENTAX	22	ZENITH BETA	10
PHILCO	08 39	ZENITH VHS	40

CATV

Manufacturer	Manufacturer's Code	Manufacturer	Manufacturer's Code
GEMINI	14 27	PIONEER	23 29
G.I.	14 15	REGENCY	08
HAMLIN	03 04 24	SCIENTIFIC ATLANTA	12 36 41
JERROLD	05 06 07 16 17	TEXSCAN	26
MACON	30	TOCOM	02 25
MAGNAVOX	09	UNIKA	22
OAK	01 28 35	VID TECH	36
PANASONIC	11 13	VIEWSTAR	20 21
PARAGON	10	ZENITH	10
PHILIPS	19 20 21 32 33		

AV COMPU LINK Connection

—AV COMPU LINK

This TV set is capable of using an AV COMPU LINK. If the TV set is connected to a JVC AV Compu Link-capable VCR and/or hi-fi receiver (or amplifier), automatic switching functions are available.

If the TV set is connected to a JVC AV Compu Link-capable VCR, simply insert a video cassette (with its safety tabs removed) such as a prerecorded video into the VCR, the TV set turns on automatically and the video playback is displayed on the screen, without any manual switching necessary.

If the TV set is connected via a JVC AV Compu Link-capable hi-fi receiver (or amplifier) to a JVC AV Compu Link-capable VCR, you can do the following:

- Insert a video cassette (with its safety tabs removed) into the VCR. Both the TV set and receiver (or amplifier) turn on automatically and the video playback is displayed on the screen.
- Change the input source selector of the receiver (or amplifier) to the video input mode. The TV set's input source selector will also be set to the video input mode [VIDEO-1 or VIDEO-2] automatically.
- Turn on (or off) the receiver (or amplifier). Both the TV set and VCR are also turned on (or off) automatically. For example, if the input source selector of the receiver (or amplifier) is set to "VCR1" and the receiver (or amplifier) is turned on, the TV set and VCR connected to VCR1 are turned on.

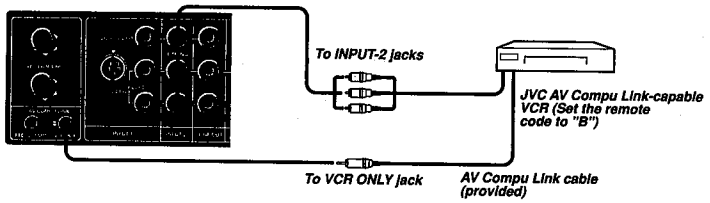
In addition to connecting video and audio signal cables, connect the provided AV Compu Link cable to the AV COMPU LINK jacks (VCR ONLY or RECEIVER/AMP jacks) to transmit the control signals via the AV Compu Link cable.

Notes:

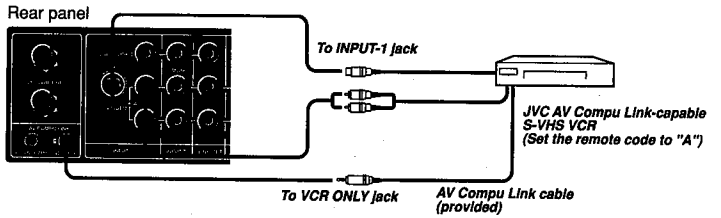
- If the TV set is connected to a VCR, connect the provided AV Compu Link cable to the VCR ONLY jack of the TV set. If the VCR is connected to the RECEIVER/AMP jack, this function is not operable. If the TV set is connected to the monitor output of an AV compu Link-capable receiver (or amplifier), and the VCR is connected to the receiver (or amplifier), connect the provided AV Compu Link cable to the RECEIVER/AMP jack. If the receiver (or amplifier) is connected to the VCR ONLY jack, this function cannot be operated.
- When a VCR or receiver (or amplifier) is connected to the AV COMPU LINK jacks, set the remote code of the VCR's remote control unit as follows:
  - If an S-VHS VCR is connected to the TV set's INPUT 1 jacks, set the S-VHS VCR's remote code to "A".
  - If a VHS VCR is connected to the TV set's INPUT 2 jacks, set the VCR's remote code to "B".
- Also refer to the instruction manuals of the VCR and/or receiver (or amplifier).

Connecting an AV COMPU LINK-Capable VCR

Rear Panel



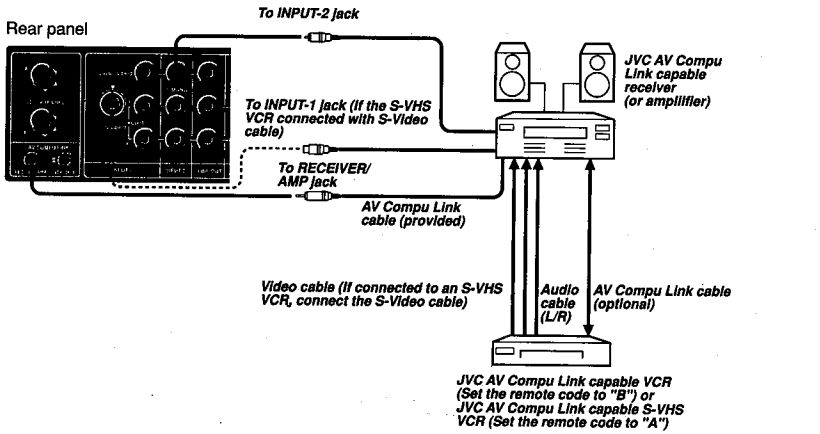
Connecting an AV COMPU LINK-Capable S-VHS VCR


Rear panel
To INPUT-1 jack
JVC AV Compu Link-capable S-VHS VCR (Set the remote code to "A")
To VCR ONLY jack
AV Compu Link cable (provided)

Connecting an AV COMPU LINK-Capable Receiver (or Amplifier)

Note:

- If the AV Compu Link cable is connected to the TV set's RECEIVER/AMP jack, the TV set's remote control sensor does not detect the signals from the Remote Control. Direct the Remote Control's signals at the receiver (or amplifier). Signals from the Remote Control are transmitted via the AV Compu Link cable to the TV set.


To INPUT-2 jack
Rear panel
JVC AV Compu Link capable receiver (or amplifier)
To INPUT-1 jack (If the S-VHS VCR connected with S-Video cable)
To RECEIVER/ AMP jack
AV Compu Link cable (provided)
Video cable (If connected to an S-VHS VCR, connect the S-Video cable)
Audio cable (L/R)
AV Compu Link cable (optional)
JVC AV Compu Link capable VCR (Set the remote code to "B") or JVC AV Compu Link capable S-VHS VCR (Set the remote code to "A")

(No.50796) 1-19

AV-35BH4

Troubleshooting

- If the power cord plug is disconnected from the AC outlet, or the TV antenna is causing problems, you may think there is a problem with the TV itself; be sure to check the following items before calling for service.

Important:
- Review all the instructions written in this user guide.

■ GENERAL

Problem	Cause	Action
No power supply	Is the power cord plug disconnected?	Insert the plug into AC outlet (page 7).
No picture or sound	Is the antenna disconnected?	Check the antenna connections (page 7).
	Is the antenna facing in the correct direction?	Position the antenna in the correct direction.
	Is the input mode (TV, VIDEO-1,2) set to an incorrect position?	Press TV/VIDEO to engage the correct mode (page 10).
	Is the broadcast mode set properly?	Press ANT/CABLE to select the desired mode (page 10).
	Is the CHILD TIMER operating?	Enter the ID number. (page 25).
	Is the TV station the problem?	Watch another channel. If there are no problems with another channel, the TV station may be the problem.
Inoperable remote control	Are batteries exhausted?	Repalce the batteries (page 7).
	Are the batteries' +/– polarity placed correctly?	Re-install the batteries correctly (page 7).
	Is the remote control too far from the TV?	Operate the remote control within approx. 23 ft (7 meters) of the TV.
	Are there any obstructions between the remote control and TV?	Remove any obstructions between the remote control and TV.
	Is the 3-way mode selector set properly?	When operating the TV, set the 3-way mode selector to TV.
	The TV does not receive remote control commands for some reason.	Press POWER on the TV to turn it off, then turn it on again.
The channel cannot be selected.	Have the channels been set?	Preset the channels (page 8).
	Is the selected channel guarded?	Press the remote control number keys to select the channel, then enter the ID number (page 27).
The power shuts off automatically	Is the 12-hour sleep timer set?	Press POWER to turn on the TV again (page 24).
	Is the CHILD TIMER set?	Press POWER to turn on the TV, then enter the ID number (page 24).
The TV clock is incorrect or the clock has stopped.	Was there a power interruption?	Set the clock correctly (page 21).
The timer operation does not work.	Was there a power interruption?	If there is a power interruption, the timer operation will be canceled. Set it again. Also check that the clock is correct. (pages 21 to 25).

■ SOUND

Problem	Causes	Action
Bilingual/stereo broadcasts cannot be heard.	Is the MTS mode set correctly?	Set it to STEREO or SAP mode (page 16).
No sound is output from the TV's speakers.	Is the EXT SPKR switch set to "MAIN" or "SURROUND 1"?	Set the EXT SPKR switch to "SURROUND 2" (page 31).
No sound comes from the cordless headphones.	Is the power of cordless headphones turned on?	Turn on the power of cordless headphones (page 33).
	Is the VOLUME of the cordless headphones set to minimum?	Turn on the VOLUME of the cordless headphones to a desired level (page 33).
	Are the batteries of cordless headphones exhausted?	Replace the batteries (page 32).
	Is the cordless sound set at "OFF"?	Set it at "MAIN" o r "MAIN/PIP" (page 33).
Noise is mixed in the sound of cordless headphones.	Is there any obstacle between light emitter of TV and the light receiver of cordless headphones?	Remove the obstacle.
	Is the cordless headphones far away from the TV?	Use it near the TV.
	Are the batteries of cordless headphones exhausted?	Replace the batteries (page 32).
The power of cordless headphones turns off automatically.	Is it being used for more than 3 hours?	To prevent the cordless headphones from inadvertently remaining on, its power is automatically cur off after about 3 hours. If it is to be used for more than 3 hours, press POWER once again (page 33).

■ PICTURE

Problem	Cause	Action
Poor colors	Are the COLOR and TINT controls adjusted incorrectly?	Adjust the COLOR and TINT controls (page 14).
	Has the THEATER STATUS mode been set?	Cancel the THEATER STATUS (page 16).
	Is it a black and white program?	Change the channel and watch a color program.
Lines or streaks in the picture (interference)	Could there be interference from a personal computer, TV, VCR, audio component, jamming by a radio station, etc.?	Move the components apart untill the interference is eliminated. Move the antenna to a different position or direction.
Spotted picture (crosstalk)	Could there be interference from a hair dryer, electric cleaner, neon sign, high tension wire, automobile, motorcycle, etc.?	Move the antenna away from the source of interference. Replace the antenna cable with a coaxial cable, which is less prone to interference.
Double pictures (ghost)	Could the direct signals from a TV broadcast station be affected by reflected signals from mountains or buildings, etc.?	Move the antenna to a different position, height or direction. Replace with an antenna having good better directional characteristics.
Snowy picture (image noise)	Is the external antenna cut or disconnected?	Check the antenna connection (page 7). Position the antenna correctly.
	Is the antenna turned the wrong direction due to strong wind, etc.?	Replace or repair the antenna.
	Is the antenna damaged?	Replace or repair the antenna.

■ PICTURE

Problem	Cause	Action
The screen turns blue.	Is a non-broadcasting channel selected?	Select a broadcast channel.
	Is Noise Mute on?	Turn off Noise Mute (page 28).
When a video tape is played, a blue background appears first.	Is Noise Mute on?	Turn off Noise Mute (page 28).
The second picture does not appear on the screen.	Is the VCR or playback device connected to the TV?	Connect the VCR or playback device to the TV and starts playback (page 30).

The following are normal occurrences and are not the result of TV malfunctions:

- When you touch the CRT (Cathode Ray Tube: Picture tube) surface, you might feel a slight charge of static electricity. This is because the CRT contains static electricity; it does not affect the human body.
- Your TV may emit a crackling sound due to a sudden change in temperature. There is no problem unless the picture or sound is abnormal.
- When a still bright image (of a white dress, for example) appears on the screen, the image may be colored. This problem occurs in all CRTs, and as the bright image disappears, such coloration also disappears.

Specifications

Model	AV-27BX4	AV-31BX4	AV-35BH4
Type	COLOR TELEVISION		
Receiving	NTSC system, BTSC system (Multichannel Sound)		
Received	VHF 2 to 13, UHF 14 to 69; Sub Mid, Mid, Super, Hyper and Ultra bands (180-channel frequency synthesizer system)		
Power supply	120V AC, 60Hz		
Power consumption	Max. 160W, Avg. 110W	Max. 180W, Avg. 130W	Max. 215W, Avg. 145W
Screen size	27" measured diagonally Full Square	31" measured diagonally Full Square	35" measured diagonally Full Square
Audio output	5W + 5W		
Speakers	2"x4-3/4" oblong type x2	4" round, woofer x 2 1-3/8" round, tweeterx2	3-3/16" x 4-3/4" ovalx2
Antenna terminal	75-ohms (VHF/UHF) terminal (F-type connector)x2		
External input jacks	Video: 1Vp-p, 75-ohms Audio: 500mV rms (–4dBs), high impedance		
S-Video input jacks	Y: 1Vp-p positive, 75-ohms (negative sync provided) C: 0.286Vp-p (burst signal), 75-ohms		
Variable audio output jacks	More than 0 to 1550mV rms (+6dBs), low impedance (400Hz when modulated 100%)		
Line output jacks	Video: 1Vp-p, 75-ohms Audio: 500mV rms (–4dBs), low impedance (400Hz when modulated 100%)		
AV COMPU LINK jacks	3.5 mm ø Mini jack x 2		
Speaker output jacks	Impedance 6 to 8 ohms		
Infrared cordless system	Infrared wavelength : 850 nm Modulation mode : Frequency modulation Carrier frequency : Right channel /2.8MHz Left channel /2.3MHz		
External dimensions (WxHxD)	25-3/4"x23-1/16"x20-3/8"	30-1/4"x24-17/32"x21-17/32"	36-1/8"x29-1/2"x23-7/8"
Weight	88 lbs	128.5 lbs	166.8 lbs
Accessories	Remote control unit (RM-C672) x1 Cordless headphones x1 AA-size dry cell battery x2 AV Compu Link cable (1.5 m) x1		

Design and specifications subject to change without notice.

(No.50796) 1-21

HOW TO LOCATE YOUR JVC SERVICE CENTER

TOLL FREE: 1-800-537-5722

Dear customer:
In order to receive the most satisfaction from your purchase, read the instruction booklet before operating the unit. In the event that repair is necessary, or for the address nearest your location, please refer to the factory service center list below or within the Continental United States, call 1-800-537-5722 for your authorized servicer. Remember to retain your Bill of Sale for Warranty Service.

–JVC

JVC SERVICE & ENGINEERING COMPANY OF AMERICA

DIVISION OF US JVC CORP.

FACTORY SERVICE CENTER LOCATIONS

107 Little Falls Road
Fairfield, NJ 07004-2105
(201) 808-9279

5665 Corporate Avenue
Cypress, CA 90630-0024
(714) 229-8011

230 Ellot Street
Ashland, MA 0172-2377
(508) 881-5923

1500 Lakes Parkway Lawenceville,
GA 30243-5357 (404) 339-2522

10700 Hammerly Suite 110
Houston, TX77043
(713) 935-9331

14505 Commerce Way
Miami Lakes, FL 33016-1512
(305) 362-6252

705 Enterprise Street
Aurora, IL 60504-8149
(708) 851-7855

2969 Mapunapuna Place
Honolulu, HA 96819-2040
(808) 833-5828

890 Dubuque Avenue
South San Francisco, CA
94080-1804
(415) 871-2666

Sophisticated electronic products may require occasional service. Just as quality is a keyword in the engineering and production of the wide array of JVC products, service is the key to maintaining the high level of performance for which JVC is world famous. The JVC service and engineering organization stands behind our products.

NATIONAL HEADQUARTERS
JVC SERVICE & ENGINEERING COMPANY OF AMERICA
DIVISION OF US JVC CORP.
107 Little Falls Road
Fairfield, NJ 07004-2105

If you ship the product...

Pack your JVC unit in the original carton or one of equivalent size and strength. Enclose, with the unit, a letter stating the problem or symptom that exists and also a copy of the receipt or bill of sale you received when you purchased your JVC unit. Print your home return address on the outside and the inside of the carton. Send to the appropriate JVC Factory Service Center as listed above.

Don't service it yourself.

CAUTION
To prevent electrical shock, do not open the cabinet. No user serviceable parts inside. Refer servicing to qualified service personnel.

ACCESSORIES

To purchase accessories for your JVC product, you may contact your local JVC Dealer. Or from the 48 Continental United States call toll free: 800-882-2345.

LIMITED WARRANTY

JVC

COLOR TV 1-1-2

JVC COMPANY OF AMERICA warrants this product and all parts thereof, except as set forth below ONLY TO THE ORIGINAL PURCHASER AT RETAIL to be FREE FROM DEFECTIVE MATERIALS AND WORKMANSHIP from the date of original retail purchase for the period as shown below. ("The Warranty Period") (PICTURE TUBE is covered for Two(2) years.)

MODEL NO.	SERIAL NO.	PARTS 1 YR	LABOR 1 YR

THIS LIMITED WARRANTY IS VALID ONLY IN THE FIFTY (50) UNITED STATES, THE DISTRICT OF COLUMBIA AND IN THE COMMONWEALTH OF PUERTO RICO.

WHAT WE WILL DO:
If this product is found to be defective, JVC will repair or replace defective parts at no charge to the original owner. Such repair and replacement services shall be rendered by JVC during normal business hours at JVC authorized service centers. Parts used for replacement are warranted only for the remainder of the Warranty Period. All products and parts thereof may be brought to a JVC authorized service center on a carry-in basis except for Television sets having a screen size 25 inches and above which are covered on an in-home basis.

WHAT YOU MUST DO FOR WARRANTY SERVICE:
Return your products to a JVC authorized service center with a copy of your bill of sale. For your nearest JVC authorized service center, please call toll free: (800) 537-5722.
If service is not available locally, box the product carefully, preferably in the original carton, and ship, insured, with a copy of your bill of sale plus a letter of explanation of the problem to the nearest JVC Factory Service Center, the name and location of which will be given to you by the toll-free number.

If you have any questions concerning your JVC Product, please contact our Customer Relations Department.

JVC COMPANY OF AMERICA
DIVISION OF US JVC CORP.
41 Slater Drive
Elmwood Park, New Jersey 07407

WHAT IS NOT COVERED:
This limited warranty provided by JVC does not cover:
1. Products which have been subject to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, or if repaired or serviced by anyone other than a service facility authorized by JVC to render such service, or if affixed to any attachment not provided with the products, or if the model or serial number has been altered, tampered with, defaced or removed;
2. Initial installation and installation and removal for repair;
3. Operational adjustments covered in the Owner's Manual, normal maintenance, video and audio head cleaning;
4. Damage that occurs in shipment, due to act of God, and cosmetic damage;
5. Signal reception problems and failures due to line power surge;
6. Video Pick-up Tubes/CCD Image Sensor, Cartridge, Stylus (Needle) are covered for 90 days from the date of purchase;
7. Accessories;
8. Batteries (except that Rechargeable Batteries are covered for 90 days from the date of purchase).

There are no express warranties except as listed above.

THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN.

JVC SHALL NOT BE LIABLE FOR THE LOSS OF USE OF THE PRODUCT, INCONVENIENCE, LOSS OR ANY OTHER DAMAGES, WHETHER DIRECT, INCIDENTIAL OR CONSEQUENTIAL (INCLUDING, WITHOUT LIMITATION, DAMAGE TO TAPES, RECORDS OR DISCS) RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE WARRANTY PERIOD SET FORTH ABOVE.

Some states do not allow the exclusion of incidental or consequential damages or limitations on how long an implied warranty lasts, so these limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

CABLE TV CHANNEL CONVERSION CHART

In addition to normal TV reception from an antenna for VHF (Channels 2 to 13) and UHF (Channels 14 to 69), your TV set is equipped to receive non-scrambled cable TV channels. Sub-Mid band (A-8, A-4 to A-1), Mid band (A to I), Super band (J to W), Hyper band (W+1 to W+28) and Ultra band (W+29 to W+84) can be received by using the channel selections as shown in the following chart.

Note:

- Reception of channel A-5 ("95" of the TV set's on-screen CABLE channel numbers) is not recommended for your TV set.

*	A-8	A-4	A-3	A-2	A-1	A	B	C	D	E	F	G	H	I	J	K	L	M	N
**	01	96	97	98	99	14	15	16	17	18	19	20	21	22	23	24	25	26	27

*	O	P	Q	R	S	T	U	V	W	W+1	W+2	W+3	W+4	W+5	W+6	W+7	W+8	W+9	W+10
**	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46

*	W+11	W+12	W+13	W+14	W+15	W+16	W+17	W+18	W+19	W+20	W+21	W+22	W+23	W+24	W+25	W+26	W+27	W+28	W+29
**	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65

*	W+30	W+31	W+32	W+33	W+34	W+35	W+36	W+37	W+38	W+39	W+40	W+41	W+42	W+43	W+44	W+45	W+46	W+47	W+48
**	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84

*	W+49	W+50	W+51	W+52	W+53	W+54	W+55	W+56	W+57	W+58	W+59	W+60	W+61	W+62	W+63	W+64	W+65	W+66	W+67
**	85	86	87	88	89	90	91	92	93	94	100	101	102	103	104	105	106	107	108

*	W+68	W+69	W+70	W+71	W+72	W+73	W+74	W+75	W+76	W+77	W+78	W+79	W+80	W+81	W+82	W+83	W+84
**	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125

* :Regular cable channel designations
** :Your TV set's corresponding on-screen CABLE channel numbers

JVC®
JVC COMPANY OF AMERICA
DIVISION OF US JVC CORP.
41 Slater Drive, Elmwood Park, N.J. 07407

2731X35H4IBA-A
Ⓐ 1
0693-Ki-N-G-S

PARTS LIST

CAUTION

- The parts marked ⚠ are very important for the safety. When replacing these parts, be sure to use specified ones to secure the safety and performance.
- The module circuit board is supplied together with the assembly, but the parts which do not have the drawing in this Parts List, P. W. Board Ass'y and the Parts No. columns of which are filled with lines —— . will not be supplied.
- As a rule, the resistors and capacitors which are indicated as shown in (NOTE 2) "HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS" are not shown in the list of the parts on the board.
  When ordering the service parts, confirm the resistance/rated power, capacitance/rated voltage, and type of the parts, then order by the part No. indicated according to (NOTE 2).

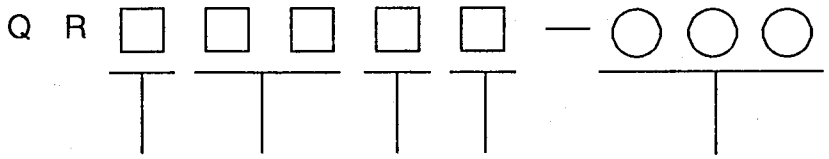
(NOTE 1) ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
C R	Carbon Resistor	C CAP.	Ceramic Capacitor
F R	Fusible Resistor	E CAP.	Electrolytic Capacitor
P R	Plate Resistor	M CAP.	Mylar Capacitor
V R	Variable Resistor	HV CAP.	High Voltage Capacitor
HV R	High Voltage Resistor	MF CAP.	Metalized Film Capacitor
MF R	Metal Film Resistor	MM CAP.	Metalized Mylar Capacitor
MG R	Metal Glazed Resistor	MP CAP.	Metalized Polystyrol Capacitor
MP R	Metal Plate Resistor	PP CAP.	Polypropylene Capacitor
OM R	Metal Oxide Film Resistor	PS CAP.	Polystyrol Capacitor
CMF R	Coating Metal Film Resistor	TF CAP.	Thin Film Capacitor
UNF R	Non-Flammable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH V R	Chip Variable Resistor	TAN. CAP.	Tantalum Capacitor
CH MG R	Chip Metal Glazed Resistor	CH C CAP.	Chip Ceramic Capacitor
COMP. R	Composition Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
LPTC R	Linear Positive Temperature Coefficient Resistor	CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

TOLERANCES									
F	G	J	K	M	N	R	H	Z	P
±1%	±2%	±5%	±10%	±20%	±30%	+30% -10%	+50% -10%	+80% -20%	+100% -0%

(NOTE 2) HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS

■ RESISTOR



Symbol	Part Name
C	COMP.R
D	C R
S	CH MG R

Symbol	Rated Power
0 1	1 w
1 2	1/2 w
1 4	1/4 w
1 6	1/6 w
1 8	1/8 w

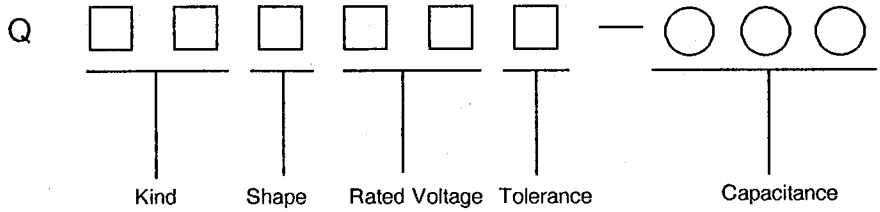
Symbol	Shape
1	Straight lead
8	Chip

Indicate with first two-figure expressed by Ω and following 0.
please note that,in case of resistance less than 10 Ω, a letter "R"will be effective as point.

EX.

2.2 Ω	=			2R2
470 Ω	=	47×10^{1}	→	471
150kΩ	=	15×10^{4}	→	154

■ CAPACITOR



Symbol	Part Name
CS	C CAP.
CS	CH C CAP.
ET	E CAP.
FM	M CAP.

5Figure / 6Figure	0	1	2
A		10V	100V
C		16V	160V
D			200V
E		25V	250V
H		50V	500V
J	6.3V	63V	
V		35V	

Indicate with first two-figure expressed by pF and following 0.
Please note that,in case of capacitance less than 10 pF a letter "R" will be effective as point.

EX

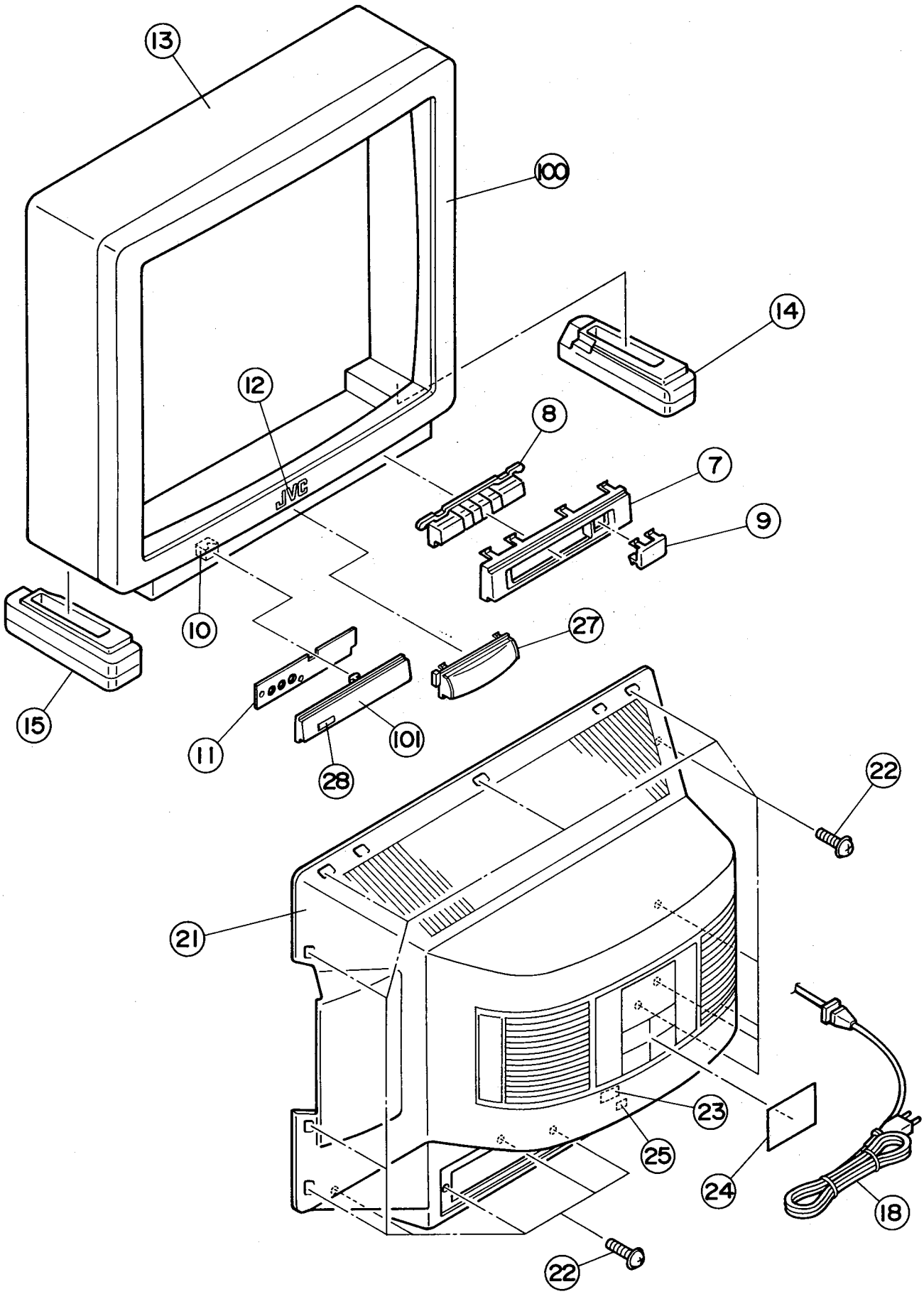
5pF	=			5R0
1000pF	=	10×10^{2}	→	102
47μF	=	47×10^{6}	→	476

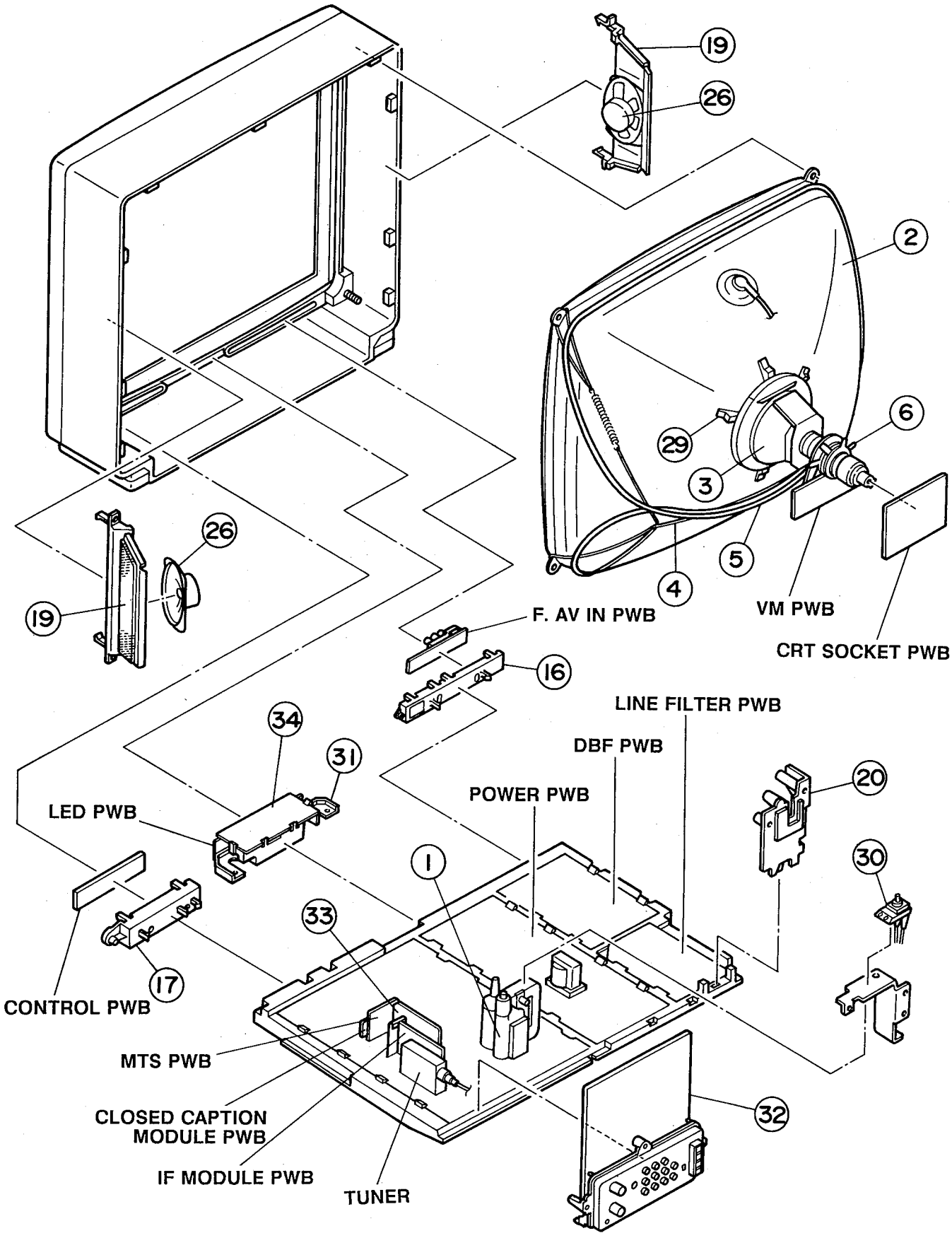
Symbol	Shape
1	Straight lead
1	Leads in the same direction
8	Chip
A	Leads in the same direction (compact part)

EXPLODED VIEW PARTS LIST

⚠	Ref.No.	Part No.	Part Name	Description	Local
⚠	1	CE42374-00CKJ1	F B T	T1551	*
⚠	2	A89KPP50X(V)	PICTURE TUBE	V01	*
⚠	3	CE20254-00AJ1	DEF YOKE	DY01	*
	4	CHGB0009-AA-FA	BRAIDED ASSY		*
⚠	5	CELD032-001J3	DEG COIL	L01	*
	6	CE41650-00A	P.C.MAGNET		*
	7	CM11791-A02-VA	CONTROL PANEL		*
	8	CM33823-00A-KH	PUSH KNOB ASSY		*
	9	CM33754-001-V0	REMOCON WINDOW		*
	10	CM47735-00A-A	DOOR LATCH		*
	11	CM34679-005-VH	OPERATION SHEET		*
	12	CM46084-A01	BRAND MARK		*
	13	CM11787-A0B-MA	BODY COVER ASSY		*
	14	CM21755-00E-KD	FOOT ASSY(R)		*
	15	CM21755-00F-KD	FOOT ASSY(L)		*
	16	CM22064-A01-VA	CONTROL BASE(A)		*
	17	CM22065-A01-VA	CONTROL BASE(B)		*
⚠	18	QMP14G0-185J3	POWER CORD		*
	19	CM34678-B0A-KD	SPEAKER GRILLE	×2	*
	20	CM33811-A01-VA	CORD PLATE		*
	21	CM11712-A31-MA	REAR COVER		*
	22	GBSB4016N	TAPPING SCREW	×15	*
	23	CM47691-001-A	HYATT LABEL		*
	24	CM44889-003-A	RATING LABEL		*
	25	CM47144-001-A	SP WARNING LABEL		*
⚠	26	CEBSN12D-03KJ3	CONE SPEAKER	×2 SP01,SP02	*
	27	CM22689-A01-V0	CORDLESS COVER		
	28	CM46864-A02	DOOR PLATE		
	29	CE40764-00A	WEDGE ASSY	×4	
⚠	30	CEVZ001-956R	TRIM R(H.FOCUS)	R01	
	31	CM22690-A01-VA	PB HOLDER		*
	32	SGX-8004A	AV TERMI.PB ASSY		
	33	SGX-P001A8	PIP MODULE		
	34	SGX-7101A	TRANSMITTER PB		
	100	CM12170-00E-MA	FRONT PANEL ASSY	Inc.No.101	*
	101	CM22062-C01-VA	DOOR		*

EXPLODED VIEW




19
26
2
29
6
3
5
4
26
19
F. AV IN PWB
16
VM PWB
CRT SOCKET PWB
LINE FILTER PWB
DBF PWB
34
31
POWER PWB
20
LED PWB
1
30
33
17
CONTROL PWB
MTS PWB
32
CLOSED CAPTION
MODULE PWB
IF MODULE PWB
TUNER

PRINTED WIRING BOARD PARTS LIST

MAIN PW BOARD ASS'Y (SGX1020A(H2))

⚠	Symbol No.	Part No.	Part Name	Description			Local
		VARIABLE RESISTOR					
	R1113	QVPE611-203HZ	V R(NOISE)	20kΩ	B		
	R1281	QVPA601-471J5	V R(COMB.)	470 Ω	B		
	R1355	QVPE611-103HZ	V R(PICTURE)	10kΩ	B		
	R1358	QVPE611-103HZ	V R(R. BIAS)	10kΩ	B		
	R1361	QVPE611-103HZ	V R(B. BIAS)	10kΩ	B		
	R1364	QVPE611-103HZ	V R(BRIGHT)	10kΩ	B		
	R1403	QVPE611-503HZ	V R(V. HEIGHT)	50kΩ	B		
	R1406	QVPE611-503HZ	V R(V. LIN.)	50kΩ	B		
	R1513	QVPE611-201HZ	V R(H. CENTER)	200 Ω	B		
	R1601	QVPE611-103HZ	V R(SEPARATION)	10kΩ	B		
	R1899	QVPE610-104H	TRIM.R(PIP H.POSI)	100kΩ	B		
		RESISTOR					
	R1213	QRD123J-391SX	C R	390 Ω	1/2W	J	
	R1230	QRG019J-270S	OM R	27 Ω	1W	J	
	R1404	QRX019J-1R2S	MF R	1.2 Ω	1W	J	
⚠	R1410	QRC121K-221Z	COMP.R	220 Ω	1/2W	K	
⚠	R1411	QRD161J-5R6Y	C R	5.6 Ω	1/6W	J	
⚠	R1416	QRD121J-821SY	C R	820 Ω	1/2W	J	
⚠	R1501	QRG029J-223	OM R	22kΩ	2W	J	
	R1506	QRV141F-2701AY	MF R	2.7kΩ	1/4W	F	
	R1508	QRV141F-9101AY	MF R	9.1kΩ	1/4W	F	
	R1543	QRD123J-822SX	C R	8.2kΩ	1/2W	J	
⚠	R1544	QRG05AJ-222	OM R	2.2kΩ	5W	J	
⚠	R1546	QRG029J-152	OM R	1.5kΩ	2W	J	
⚠	R1547	QRG019J-821S	OM R	820 Ω	1W	J	
⚠	R1552	QRD121J-4R7SY	C R	4.7 Ω	1/2W	J	
⚠	R1553	QRD161J-562Y	C R	5.6kΩ	1/6W	J	
⚠	R1554	QRD161J-472Y	C R	4.7kΩ	1/6W	J	
⚠	R1557	QRX039J-2R2A	MF R	2.2 Ω	3W	J	
⚠	R1558	QRX039J-1R0A	MF R	1.0 Ω	3W	J	
⚠	R1560	QRD161J-332Y	C R	3.3kΩ	1/6W	J	
⚠	R1561	QRD149J-1R0S	C R	1.0 Ω	1/4W	J	
⚠	R1565	QRD121J-123SY	C R	12kΩ	1/2W	J	
⚠	R1571	QRG029J-562A	OM R	5.6kΩ	2W	J	
⚠	R1941	QRF108K-2R2	UNF R	2.2 Ω	10W	K	
		CAPACITOR					
	C1001	QFLC1HK-103MZ	M CAP.	0.01μF	50V	K	
	C1111	QEKC1HM-104GMZ	E CAP.	0.1μF	50V	M	
	C1122	QEN61HM-105ZJ3	BP E CAP.	1μF	50V	M	
	C1209	QFLC1HK-103MZ	M CAP.	0.01μF	50V	K	
	C1243	QEN41HM-335J3	BP E CAP.	3.3μF	50V	M	
	C1253	QFV71HJ-104MZ	TF CAP.	0.1μF	50V	J	
	C1254	QFLC1HK-103MZ	M CAP.	0.01μF	50V	K	
	C1257	QCS31HJ-270ZJ5	CH C CAP.	27pF	50V	J	
	C1272	QFN31HK-472ZJ1	M CAP.	4700pF	50V	K	
	C1313-14	QFLC1HK-223MZ	M CAP.	0.022μF	50V	K	
	C1316	QEN61HM-225ZJ3	BP E CAP.	2.2μF	50V	M	
	C1318	QFN31HK-102ZJ1	M CAP.	1000pF	50V	K	
	C1356	QFLC1HK-103MZ	M CAP.	0.01μF	50V	K	
	C1402	QEHC1CM-107MZ	E CAP.	100μF	16V	M	
	C1403	QFLC1HK-103MZ	M CAP.	0.01μF	50V	K	
	C1404	QEE61VK-105BZ	TAN.CAP.	1μF	35V	K	
	C1405	QFV71HJ-564MZ	TF CAP.	0.56μF	50V	J	
⚠	C1407	QEHC1VM-107MZ	E CAP.	100μF	35V	M	
⚠	C1410	QEHC1VM-477MZ	E CAP.	470μF	35V	M	
	C1411	QFLC2AK-333MZ	M CAP.	0.033μF	100V	K	
	C1451	QEN61HM-105ZJ3	BP E CAP.	1μF	50V	M	
	C1452	QFN31HJ-122ZJ1	M CAP.	1200pF	50V	J	
	C1454	QFN31HJ-472ZJ1	M CAP.	4700pF	50V	J	
	C1502	QFLC1HK-223MZ	M CAP.	0.022μF	50V	K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
CAPACITOR				
C1505	QEN61VM-475ZJ3	BP E CAP.	4.7 µF 35V	M
C1506	QFLC1HK-223MZ	M CAP.	0.022 µF 50V	K
C1507	QFLC1HJ-123MZ	M CAP.	0.012 µF 50V	J
C1508	QFN31HJ-562ZJ1	M CAP.	5600 p F 50V	J
C1509	QFN31HJ-102ZJ1	M CAP.	1000 p F 50V	J
C1511	QEN61HM-105ZJ3	BP E CAP.	1 µF 50V	M
C1543	QEHC2EM-225MZ	E CAP.	2.2 µF 250V	M
⚠ C1544	QFZ0117-1001S	MPP CAP.	1000 p F 1.4kVH	±2.5%
⚠ C1545	QFZ0117-9801S	MPP CAP.	9800 p F 1.4kVH	±2.5%
⚠ C1546	QFZ0117-9801S	MPP CAP.	9800 p F 1.4kVH	±2.5%
⚠ C1547	QFP32GJ-223M	PP CAP.	0.022 µF 400V	J
⚠ C1548	QFZ0119-804S	MPP CAP.	0.8 µF 200V	±3%
C1549-50	QEM61HK-475MZ	E CAP.	4.7 µF 50V	K
⚠ C1551	QETC1HM-107ZJ5	E CAP.	100 µF 50V	M
⚠ C1552	QFLC1HK-103MZ	M CAP.	0.01 µF 50V	K
C1554	QEHC1EM-476MZ	E CAP.	47 µF 25V	M
⚠ C1555	QEHC1EM-477MZ	E CAP.	470 µF 25V	M
⚠ C1556	QETB1VM-228J3	E CAP.	2200 µF 35V	M
C1557	QFN31HK-222ZJ1	M CAP.	2200 p F 50V	K
⚠ C1558	QETB2EM-336J5	E CAP.	33 µF 250V	M
C1559	QFV71HJ-154MZ	TF CAP.	0.15 µF 50V	J
C1563	QFLC2AJ-393MZ	M CAP.	0.039 µF 100V	J
⚠ C1615	QETB1VM-108J5	E CAP.	1000 µF 35V	M
C1616	QFV71HJ-124MZ	TF CAP.	0.12 µF 50V	J
⚠ C1617	QETB1VM-108J5	E CAP.	1000 µF 35V	M
C1618	QFV71HJ-124MZ	TF CAP.	0.12 µF 50V	J
⚠ C1619	QETB1VM-108J5	E CAP.	1000 µF 35V	M
C1701	QFLC1HK-333MZ	M CAP.	0.033 µF 50V	K
C1713	CECN003-101	NET CAP.		
C1720	QEN61HM-105ZJ3	BP E CAP.	1 µF 50V	M
C1730	QFLC1HK-223MZ	M CAP.	0.022 µF 50V	K
C1731	QFLC1HK-683MZ	M CAP.	0.068 µF 50V	K
C1871	QFLC1HJ-103MZ	M CAP.	0.01 µF 50V	J
C1873	QFLC1HJ-103MZ	M CAP.	0.01 µF 50V	J
C1874	QFN31HK-102ZJ1	M CAP.	1000 p F 50V	K
⚠ C1903	QETB2CM-227J5	E CAP.	220 µF 160V	M
TRANSFORMER				
T1271	CE40176-001J1	DL P TRANSF		
T1541	CE42034-002	HOR DRIVE TRANS		
COIL				
L1201	CELC002-470	CHOKE COIL	47 µH	
L1251	CELP055-820Z	PEAKING COIL	82 µH	
L1271	CELP055-220Z	PEAKING COIL	22 µH	
L1272	CELP056-180Z	PEAKING COIL	18 µH	
L1273	CELP055-820Z	PEAKING COIL	82 µH	
L1451	CELP055-561Z	PEAKING COIL	560 µH	
L1541	CE41923-001	CORE SLEEVE		
⚠ L1542	CE41029-00A	LINEARITY COIL		
L1543	CELC052-821J7	CHOKE COIL		
L1544	CE40107-001	CORD SLEEVE		
L1702	CELP056-220Z	PEAKING COIL	22 µH	
L1705	CELP055-4R7Z	PEAKING COIL	4.7 µH	
L1801	CELP055-1R0Z	PEAKING COIL	1.0 µH	
L1851	CELP055-270Z	PEAKING COIL	27 µH	
L1852	CELP055-820	PEAKING COIL	82 µH	
DIODE				
D1001	MA4330(L)-T2	ZENER DIODE		
D1201-02	1SS133-T2	SI.DIODE		
D1241-42	1SS133-T2	SI.DIODE		
D1243	RD5.6JS(B3)-T2	ZENER DIODE		
D1251	MA4130(M)-T2	ZENER DIODE		
D1252-53	RD13JS(B)-T2	ZENER DIODE		
D1301-06	1SS133-T2	SI.DIODE		

⚠	Symbol No.	Part No.	Part Name	Description	Local
	D I O D E				
	D1311	1SS133	SI.DIODE		
	D1312	MA4051(M)	ZENER DIODE		
⚠	D1401	1SR35-100A-T2	SI.DIODE		
⚠	D1402	RD75E(B)-T5	ZENER DIODE		
	D1501-03	1SS133-T2	SI.DIODE		
	D1504	MA4068(N)C1-T2	ZENER DIODE		
	D1505	1SS81-T2	SI.DIODE		
⚠	D1506	MA4068(N)C1-T2	ZENER DIODE		
⚠	D1507	1SS81-T2	SI.DIODE		
⚠	D1541	ERD07-15-L	SI.DIODE		
	D1542	RU3AM-LFB1	SI.DIODE		
⚠	D1551	1SS81-T2	SI.DIODE		
⚠	D1552	RGP10J(C1)-T3	SI.DIODE		
⚠	D1553	RGP10J-T3	SI.DIODE		
⚠	D1554	RGP10J-T3	SI.DIODE		
⚠	D1555	RH1S-T3	SI.DIODE		
	D1556	RD12E(B1)-T2	ZENER DIODE		
	D1557	1SS82-T2	SI.DIODE		
	D1601-02	RD33E(B1)-T2	ZENER DIODE		
	D1631	RD9.1E(B2)-T2	ZENER DIODE		
	D1712-13	1SS133-T2	SI.DIODE		
	D1714-15	RD6.8ES(B3)-T2	ZENER DIODE		
	D1719-26	1SS133-T2	SI.DIODE		
	D1728-29	1SS133-T2	SI.DIODE		
	D1732-35	1SS133-T2	SI.DIODE		
	D1740	MA4075(M)	ZENER DIODE		
	D1741-42	1SS133-T2	SI.DIODE		
	D1751-52	1SS133-T2	SI.DIODE		
	D1754	1SS133-T2	SI.DIODE		
	D1757-58	MA4062(M)-T2	ZENER DIODE		
	D1759	MA4075(M)-T2	ZENER DIODE		
	D1761-62	1SS133-T2	SI.DIODE		
	D1771-72	1SS133-T2	SI.DIODE		
	D1791-92	1SS133-T2	SI.DIODE		
	D1793	MA4062(H)-T2	ZENER DIODE		
	D1801-02	1SS133-T2	SI.DIODE		
	D1866-67	1SS133-T2	SI.DIODE		
	T R A N S I S T O R				
	Q1121-22	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q1201	2SA933S(QR)-T	SI.TRANSISTOR		
	Q1202	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q1203	2SA673(C)-T	SI.TRANSISTOR		
	Q1204	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q1241	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q1251-54	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q1451	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q1501	2SA933S(QR)-T	SI.TRANSISTOR		
	Q1502	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q1541	2SC2482(C1)-T	SI.TRANSISTOR		
⚠	Q1542	2SC4589-C1	SI.TRANSISTOR		
	Q1551	2SA933S(QR)-T	SI.TRANSISTOR		
	Q1701-02	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q1703-04	2SB774(RS)-T	SI.TRANSISTOR		
	Q1705	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q1707	2SA933S(QR)-T	SI.TRANSISTOR		
	Q1741-42	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q1743	2SA933S(QR)-T	SI.TRANSISTOR		
	Q1744	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q1781	2SC1740S(Q)-T	SI TRANSISTOR		
	Q1782	2SA933S(QR)-T	SI.TRANSISTOR		
	Q1791	2SC2655(Y)-T	SI.TRANSISTOR		
	Q1851	2SA933S(QR)-T	SI.TRANSISTOR		

⚠	Symbol No.	Part No.	Part Name	Description	Local
	TRANSISTOR				
	Q1862	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q1863	2SC3811(R)	SI.TRANSISTOR		
	Q1864-66	2SC1740S(QR)-T	SI.TRANSISTOR		
	I C				
	IC1001	AN78L05-Y	I.C.		
	IC1201	VC2024Z	I.C.		
	IC1251	M52005P	I.C.(M)		
	IC1351	AN5352N	I.C.		
⚠	IC1401	LA7838	I.C(MONO-ANA)		
⚠	IC1402	AN78L12-Y	I C		
⚠	IC1551	AN78N05	I.C.(M)		
⚠	IC1601	MC13516T2	I.C(MONO-ANA)		
	IC1701	MN1873221JGV2	IC		
	IC1702	MN1280-Q	I.C(DIGI-MOS)		
	IC1801	MN12C261D	I.C.(MEMORY-OTH)		
	IC1802	M50253P	I.C.(M)		
	OTHERS				
		SGX-F006A-H2	IF MODULE		
		----------	MTS PWB	SGY6002A(H2)	
		SGXT003A(H2)	CAPTION MODULE		
	CF1501	CSB503F38	CER.RESONATOR		
	CF1701	CST4.00MGW-Z	CER. RESONATOR		
	CN1005	CHA401N-35P-J	HQF PLUG		
	DL1271	CE42383-001	DELAY LINE		
⚠	RB1551	QRZ0091-002	NET.RESISTOR		
	S1271	QSL6A13-C01	LEVER SWITCH	TINT COLOR ADJ.	
	S1401	QSL6A13-C01	LEVER SWITCH	V.CENTER SW	
	S1707	QSL6A13-C01	LEVER SWITCH	VSM SERVICE SW	
⚠	TU1701	CEEM245-A03	TUNER	TU1701	
	X1301	CE41651-001J1	X-TAL		

CRT SOCKET PW BOARD ASS'Y (SGX3017A(H2))

⚠	Symbol No.	Part No.	Part Name	Description			Local
	VARIABLE RESISTOR						
	R3319	QVPA803-201M	V R(R DRIVE)	200 Ω	B		
	R3320	QVPA803-201M	V R(G DRIVE)	200 Ω	B		
	R3339	QVPA803-502M	V R(R CUT OFF)	5kΩ	B		
	R3340	QVPA803-502M	V R(G CUT OFF)	5kΩ	B		
	R3341	QVPA803-502M	V R(B CUT OFF)	5kΩ	B		
	RESISTOR						
⚠	R3304	QRG029J-153	OM R	15kΩ	2W	J	
⚠	R3305	QRG029J-153	OM R	15kΩ	2W	J	
⚠	R3306	QRG029J-183	OM R	18kΩ	2W	J	
⚠	R3307	QRG029J-183	OM R	18kΩ	2W	J	
⚠	R3308	QRG029J-183	OM R	18kΩ	2W	J	
⚠	R3309	QRG029J-153	OM R	15kΩ	2W	J	
	R3325-30	QRZ0056-332Z	COMP.R	3.3kΩ	1/2W	K	
⚠	R3363	QRC121K-105Z	COMP.R	1MΩ	1/2W	K	
	CAPACITOR						
	C3361	QFH63BK-223M	MM CAP.	0.022μF	1250V	K	
⚠	C3363	QETB2EM-106J5	E CAP.	10μF	250V	M	
	COIL						
⚠	L3301	CELP055-101	PEAKING COIL	100μH			
⚠	L3302	CELP055-121	PEAKING COIL	120μH			
⚠	L3303	CELP055-101	PEAKING COIL	100μH			
	L3304-06	CELP055-470Z	PEAKING COIL	47μH			
⚠	L3307	CELC901-043J6	HEATER CHOKE				
	DIODE						
	D3301-02	1SS133-T2	SI.DIODE				
	D3310-13	1SS133-T2	SI.DIODE				
	D3361	RM2C-LFA1	SI.DIODE				
	TRANSISTOR						
	Q3301	2SC4502-T	SI.TRANSISTOR	R OUT			
	Q3302	2SC4502-T	SI.TRANSISTOR	G OUT			
	Q3303	2SC4502-T	SI.TRANSISTOR	B OUT			
	Q3304	2SC4544-C1	SI.TRANSISTOR	R OUT			
	Q3305	2SC4544-C1	SI.TRANSISTOR	G OUT			
	Q3306	2SC4544-C1	SI.TRANSISTOR	B OUT			
	Q3307-08	2SC2878(B)-T	SI.TRANSISTOR				
	Q3311	2SC1740S(QR)-T	SI.TRANSISTOR				
	Q3312	2SA933S(QR)-T	SI.TRANSISTOR				
	Q3313	2SC1740S(QR)-T	SI.TRANSISTOR				
	Q3314	2SA933S(QR)-T	SI.TRANSISTOR				
	Q3315	2SC1740S(QR)-T	SI.TRANSISTOR				
	Q3316	2SA933S(QR)-T	SI.TRANSISTOR				
	IC						
	IC3301	JCC1002	I.C(HYBRID)				
	OTHERS						
⚠		CE41603-002J1	C R T SOCKET				
	R3364	ERZ-C05VK271Z	VARISTOR	270 Ω			
	S3301	QSL6A13-C01	LEVER SWITCH	SERVICE SW			

CONTROL PW BOARD ASS'Y (SGX4007A(H2))

⚠ Symbol No.	Part No.	Part Name	Description	Local
D I O D E				
D4715	SEL1210S	L.E.D.(RED)	POWER/ON TIMER	
I C				
IC4841	GP1U771R	IFR DETECT UNIT		
O T H E R S				
S4702	QSP1A11-C20Z	PUSH SW	FUNCTION	
S4703	QSP1A11-C20Z	PUSH SW	CH.UP	
S4704	QSP1A11-C20Z	PUSH SW	CH.DOWN	
S4705	QSP1A11-C20Z	PUSH SW	POWER	
S4706	QSP1A11-C20Z	PUSH SW	VOL.DOWN	
S4707	QSP1A11-C20Z	PUSH SW	VOL.UP	

VM PW BOARD ASS'Y (SGX7006A(H2))

⚠ Symbol No.	Part No.	Part Name	Description	Local
R E S I S T O R				
R7101	QRD123J-181SX	C R	180 Ω 1/2W J	
R7114	QRD149J-100S	C R	10 Ω 1/4W J	
R7119	CEKN001-351Z	N.THERMISTOR		
⚠ R7123	QRD161J-122Y	C R	1.2kΩ 1/6W J	
⚠ R7124	QRD161J-390Y	C R	39 Ω 1/6W J	
⚠ R7125	QRD161J-2R7Y	C R	2.7 Ω 1/6W J	
R7132	QRG029J-391A	OM R	390 Ω 2W J	
C A P A C I T O R				
C7107	QFLC1HK-103MZ	M CAP.	0.01μF 50V K	
C7108	QETC1HM-335ZJ3	E CAP.	3.3μF 50V M	
⚠ C7113	QETC2CM-106ZJ5	E CAP.	10μF 160V M	
⚠ C7114	QCY32HK-472AZ	CH C CAP.	4700pF 500V K	
⚠ C7118	QETC0JM-107ZJ3	E CAP.	100μF 6.3V M	
C O I L				
L7106	CELP055-150Z	PEAKING COIL	15μH	
D I O D E				
D7101	MA4110(M)-T2	ZENER DIODE		
D7102-03	1SS133-T2	SI.DIODE		
⚠ D7105	RH1S-T3	SI.DIODE		
D7106	RH1S-T3	SI.DIODE		
D7107	1SS133-T2	SI.DIODE		
T R A N S I S T O R				
Q7103	2SA1309A(R)-T	SI.TRANSISTOR		
Q7104-05	2SC3311A(R)-T	SI.TRANSISTOR		
Q7106	2SA1309A(R)-T	SI.TRANSISTOR		
⚠ Q7107	2SA1306(Y)	SI.TRANSISTOR		
Q7108	2SC3298(Y)	SI.TRANSISTOR		
Q7109-10	2SC3311A(R)-T	SI.TRANSISTOR		
O T H E R S				
K7102-05	CE41492-001Z	CHOKE COIL		
⚠ R7122	QRH017J-561M	F R	560 Ω 1W J	
S7101	QSL6A13-C01	LEVER SWITCH	VM SWITCH	

LED PW BOARD ASS'Y (SGX7301A(H2))

⚠ Symbol No.	Part No.	Part Name	Description	Local
D I O D E				
D7102-05	DAL5815	IR L E D		
D7202-05	DAL5815	IR L E D		
O T H E R S				
	CM35781-C01-V0	LED HOLDER		

TRANSMITTER PW BOARD ASS'Y (SGX-7101A)

⚠ Symbol No.	Part No.	Part Name	Description	Local
VARIABLE RESISTOR				
R7117	QVPE604-103H	V R(DEVI.L)	10kΩ B	
R7217	QVPE604-103H	V R(DEVI.R)	10kΩ B	
RESISTOR				
R7303	QRG029J-220A	OM R	22 Ω 2W J	
CAPACITOR				
C7101	NCT03CH-221AY	CHIP CAP.	220 p F 1600V H	
C7102	NCB21HK-473AY	CHIP CAP.	0.047 μ F 50V K	
C7106	NCT03CH-471AY	CHIP CAP.	470 p F 1600V H	
C7108	NCT03CH-220AY	CHIP CAP.	22 p F 1600V H	
C7110	NCT03CH-331AY	CHIP CAP.	330 p F 1600V H	
C7111	NCT03CH-221AY	CHIP CAP.	220 p F 1600V H	
C7112	NCB21HK-223AY	CHIP CAP.	0.022 μ F 50V K	
C7113	NCT03CH-102AY	CHIP CAP.	1000 p F 1600V H	
C7115	NCT03CH-680AY	CHIP CAP.	68 p F 1600V H	
C7116	NCT03CH-331AY	CHIP CAP.	330 p F 1600V H	
C7117	QAT3110-200A	TRIM CAP.(MOD.F.2.78)		
C7118	NCT03CH-101AY	CHIP CAP.	100 p F 1600V H	
C7201	NCT03CH-221AY	CHIP CAP.	220 p F 1600V H	
C7202	NCB21HK-473AY	CHIP CAP.	0.047 μ F 50V K	
C7206	NCT03CH-471AY	CHIP CAP.	470 p F 1600V H	
C7208	NCT03CH-220AY	CHIP CAP.	22 p F 1600V H	
C7210	NCT03CH-331AY	CHIP CAP.	330 p F 1600V H	
C7211	NCT03CH-221AY	CHIP CAP.	220 p F 1600V H	
C7212	NCB21HK-223AY	CHIP CAP.	0.022 μ F 50V K	
C7213	NCT03CH-102AY	CHIP CAP.	1000 p F 1600V H	
C7215	NCT03CH-680AY	CHIP CAP.	68 p F 1600V H	
C7216	NCT03CH-331AY	CHIP CAP.	330 p F 1600V H	
C7217	QAT3110-200A	TRIM CAP.(MOD.F.2.3)		
C7218	NCT03CH-101AY	CHIP CAP.	100 p F 1600V H	
C7301	QEKC0JM-476GMZ	E CAP.	47 μ F 6.3V M	
C7311	NCB21HK-223AY	CHIP CAP.	0.022 μ F 50V K	
C7312	NCB21HK-473AY	CHIP CAP.	0.047 μ F 50V K	
C7314	QEU51CM-477M	E CAP.	470 μ F 16V M	
C7315	NCB21HK-223AY	CHIP CAP.	0.022 μ F 50V K	
COIL				
L7101	CELP008-470YL	INDUCTOR	47 μ H	
L7201	CELP008-680YL	CHIP P COIL		
DIODE				
D7101	1SV166-W	CHIP VARI DIODE		
D7201	1SV166-W	CHIP VARI DIODE		
TRANSISTOR				
Q7101	2SC2712(Y)-W	SI.TRANSISTOR		
Q7102	2SD1757K(R)-W	CHIP TRANSISTOR		
Q7201	2SC2712(Y)-W	SI.TRANSISTOR		
Q7202	2SD1757K(R)-W	CHIP TRANSISTOR		
Q7301	2SC2712(Y)-W	SI.TRANSISTOR		
Q7304	2SA1162(YG)-W	SI.TRANSISTOR		
IC				
IC7301	XRA3308	I C		
IC7302	MC14011BCP	IC		
IC7303	AN78L05	I.C.(MONO-ANA)		

POWER PW BOARD ASS'Y (SGX9017A(H2))

⚠	Symbol No.	Part No.	Part Name	Description	Local
		VARIABLE RESISTOR			
	R9559	QVPE610-203H	TRIM R(SIDE PIN CORRECT)	20kΩ B	
⚠	R9561	QVPE610-103H	TRIM R(H.WIDTH)	10kΩ B	
		RESISTOR			
	R9551	QRG039J-100	OM R	10 Ω 3W	J
⚠	R9554	QRD161J-184Y	C R	180kΩ 1/6W	J
⚠	R9556	QRD161J-123Y	C R	12kΩ 1/6W	J
⚠	R9563	QRD161J-104Y	C R	100kΩ 1/6W	J
⚠	R9567	QRD161J-392Y	C R	3.9kΩ 1/6W	J
⚠	R9901	QRF104K-1R0	UNF R	1.0 Ω 10W	K
⚠	R9902	QRD121J-224SY	C R	220kΩ 1/2W	J
⚠	R9903	QRG039J-153	OM R	15kΩ 3W	J
	R9905	QRM055K-R22	MP R	0.22 Ω 5W	K
	R9906	QRG039J-150	OM R	15 Ω 3W	J
	R9907	QRG039J-120	OM R	12 Ω 3W	J
	R9908	QRG029J-100	OM R	10 Ω 2W	J
	R9909	QRD149J-561S	C R	560 Ω 1/4W	J
⚠	R9910	QRD149J-101S	C R	100 Ω 1/4W	J
⚠	R9913	QRG019J-223S	OM R	22kΩ 1W	J
⚠	R9914	QRD149J-101S	C R	100 Ω 1/4W	J
⚠	R9924	QRD121J-561SY	C R	560 Ω 1/2W	J
	R9930	QRG019J-101S	OM R	100 Ω 1W	J
	R9931	QRG029J-181A	OM R	180 Ω 2W	J
⚠	R9932	QRG029J-101A	OM R	100 Ω 2W	J
⚠	R9991	QRC121K-275EZ	COMP.R	2.7MΩ 1/2W	K
		CAPACITOR			
	C9553	QFLC1HK-823MZ	M CAP.	0.082 µF 50V	K
	C9555	QFLC1HK-823MZ	M CAP.	0.082 µF 50V	K
⚠	C9557	QETC1VM-476ZJ3	E CAP.	47 µF 35V	M
⚠	C9910	QCZ9033-102A	C CAP.	1000 p FAC125V	K
⚠	C9911	QCZ9033-102A	C CAP.	1000 p FAC125V	K
⚠	C9912	QCZ9033-102A	C CAP.	1000 p FAC125V	K
⚠	C9913	QCZ9033-102A	C CAP.	1000 p FAC125V	K
⚠	C9914	QEZ0145-687R	E CAP.	680 µF 200V	M
⚠	C9915	QFP32GK-103M	PP CAP.	0.01 µF 400V	K
⚠	C9916	QFP32JK-222M	PP CAP.	2200 p F 630V	K
	C9917	QFN32DK-333J1	M CAP.	0.033 µF 200V	K
	C9918	QEHB2AM-107M	E CAP.	100 µF 100V	M
	C9919	QEHC1HM-476MZ	E CAP.	47 µF 50V	M
	C9920	QFV81HJ-105M	TF CAP.	1 µF 50V	J
⚠	C9921	QCS32HJ-331A	CH C CAP.	330 p F 500V	J
⚠	C9931	QCZ0128-681A	C CAP.	680 p F 500V	K
⚠	C9932	QCY31HK-331ZJ5	CH C CAP.	330 p F 50V	K
⚠	C9933	QCZ0128-332A	C CAP.	3300 p F 500V	K
⚠	C9934	QCY31HK-102ZJ5	CH C CAP.	1000 p F 50V	K
⚠	C9935	QEZ0179-337M	E CAP.	330 µF 200V	M
⚠	C9937	QETB1VM-338J5	E CAP.	3300 µF 35V	M
⚠	C9939	QCY31HK-331ZJ5	CH C CAP.	330 p F 50V	K
⚠	C9941	QEHB1EM-338M	E CAP.	3300 µF 25V	M
	C9942	QEHC1CM-107MZ	E CAP.	100 µF 16V	M
⚠	C9991	QCZ9029-103M	C CAP.	0.01 µ FAC125V	M
⚠	C9992	QCZ9029-103M	C CAP.	0.01 µ FAC125V	M
		TRANSFORMER			
⚠	T9901	CE42342-002	SW TRANSF		
⚠	T9902	CE41741-002J1	POWER TRANSF		
		COIL			
⚠	L9901	CELC901-100J6	HEATER CHOKE		
	L9903-04	CE40107-001	CORD SLEEVE		
	L9909	CE41923-001	CORE SLEEVE		
	L9911-12	CE41923-001	CORE SLEEVE		

⚠ Symbol No.	Part No.	Part Name	Description	Local
D I O D E				
⚠ D9901	S4VB40-L15	BRIDGE DIODE		
⚠ D9902	RU2-T3	SI.DIODE		
D9903	RGP10J(C1)-T3	SI.DIODE		
D9904	1SS81-T2	SI.DIODE		
⚠ D9921	RU4AM-C1	SI DIODE		
⚠ D9922	RU4YX-C1	SI.DIODE		
⚠ D9923	U19E-C2	SI.DIODE		
⚠ D9924	U19E-C2	SI.DIODE		
D9931	S1WB(A)10	SI.DIODE		
D9932-34	1SS133-T2	SI.DIODE		
T R A N S I S T O R				
Q9551	2SC1740S(QR)-T	SI.TRANSISTOR		
Q9552	2SA1309A(QR)-T	SI.TRANSISTOR		
Q9553	2SD1408(OY)	SI.TRANSISTOR		
Q9901	2SC1740S(QR)-T	SI.TRANSISTOR		
Q9931	2SC1959(Y)-T	SI.TRANSISTOR		
I C				
⚠ IC9901	STR-S6301	I.C(HYBRID)		
⚠ IC9902	UPC2412HF	I.C(MONO-ANA)		
⚠ IC9921	SE120N	I.C.		
O T H E R S				
	CEHP00N-001QS	HEAT SINK		
⚠ PC9902	TLP621(B)	IC(PH COUPLER)		
⚠ R9926	QRH027J-100M	F R	10 Ω 2W J	
⚠ RY9901	CESK023-001	RELAY		
TH9501	CEKP004-001	P T C		

AV TERMINAL PW BOARD ASS'Y (SGX-8004A)

⚠ Symbol No.	Part No.	Part Name	Description	Local
RESISTOR				
R8111	QRD123J-102SX	C R	1k Ω 1/2W	J
R8112	QRD123J-221SX	C R	220 Ω 1/2W	J
R8113	QRD123J-102SX	C R	1k Ω 1/2W	J
R8114	QRD123J-221SX	C R	220 Ω 1/2W	J
R8136	QRD123J-150SX	C R	15 Ω 1/2W	J
R8301	QRD123J-100SX	C R	10 Ω 1/2W	J
CAPACITOR				
C8101	NCB21HK-103AY	CHIP CAP.	0.01 µF 50V	K
C8102	QEKC1HM-105GMZ	E CAP.	1 µF 50V	M
C8103	QEKC1CM-106GMZ	E CAP.	10 µF 16V	M
C8104	QEKC1HM-105GMZ	E CAP.	1 µF 50V	M
C8105	QEKC1CM-106GMZ	E CAP.	10 µF 16V	M
C8106-07	QEKC1HM-105GMZ	E CAP.	1 µF 50V	M
C8108	QEKC1CM-106GMZ	E CAP.	10 µF 16V	M
C8109-12	NCT03CH-101AY	CHIP CAP.	100 p F 1600V	H
C8113	QEKC1CM-226GMZ	E CAP.	22 µF 16V	M
C8114	QEKC1CM-107MZ	E CAP.	100 µF 16V	M
C8115	QEKC1CM-106GMZ	E CAP.	10 µF 16V	M
C8116-17	NCT03CH-271AY	CHIP CAP.	270 p F 1600V	H
C8120	QEKC1CM-107MZ	E CAP.	100 µF 16V	M
C8121	QEU51AM-108M	E CAP.	1000 µF 10V	M
C8122-23	QEPB1EM-335M	BP E CAP.	3.3 µF 25V	M
C8151-61	NCB21HK-102AY	CHIP CAP.	1000 p F 50V	K
C8164-66	NCB21HK-102AY	CHIP CAP.	1000 p F 50V	K
C8203-04	QEKC1HM-105GMZ	E CAP.	1 µF 50V	M
C8252	QEKC1HM-105GMZ	E CAP.	1 µF 50V	M
C8254	QEKC1HM-105GMZ	E CAP.	1 µF 50V	M
C8301	NCT03CH-152AY	CHIP CAP.	1500 p F 1600V	H
C8302-03	NCB21HK-332AY	CHIP CAP.	3300 p F 50V	K
C8304	NCT03CH-152AY	CHIP CAP.	1500 p F 1600V	H
C8305	QEKC1CM-107MZ	E CAP.	100 µF 16V	M
C8306	NCT03CH-331AY	CHIP CAP.	330 p F 1600V	H
C8307	NCT03CH-101AY	CHIP CAP.	100 p F 1600V	H
C8308	NCT03CH-331AY	CHIP CAP.	330 p F 1600V	H
C8309	NCT03CH-101AY	CHIP CAP.	100 p F 1600V	H
C8310	NCB21EK-104AY	CHIP CAP.	0.1 µF 25V	K
C8311	QEKC1CM-476MZ	E CAP.	47 µF 16V	M
C8312-13	QEPC1CM-106MZ	BP E CAP.	10 µF 16V	M
C8401	QEPC1HM-225MZ	BP E CAP.	2.2 µF 50V	M
C8402-03	NCB21EK-104AY	CHIP CAP.	0.1 µF 25V	K
C8404	QEPC1HM-105GMZ	BP E CAP.	1 µF 50V	M
C8405-06	NCB21EK-104AY	CHIP CAP.	0.1 µF 25V	K
C8407	QEKC1HM-105GMZ	E CAP.	1 µF 50V	M
C8408-09	NCB21EK-104AY	CHIP CAP.	0.1 µF 25V	K
C8410	QEKC1HM-105GMZ	E CAP.	1 µF 50V	M
C8411	QEPC1HM-225MZ	BP E CAP.	2.2 µF 50V	M
C8412-13	NCB21HK-272AY	CHIP CAP.	2700 p F 50V	K
C8414	QEKC1CM-476MZ	E CAP.	47 µF 16V	M
C8415	QEKC1CM-106GMZ	E CAP.	10 µF 16V	M
C8416	QEPC1HM-105GMZ	BP E CAP.	1 µF 50V	M
C8418	NCF11HZ-224AY	CHIP C CAP.	0.22 µF 50V	Z
C8419-20	NCT03CH-221AY	CHIP CAP.	220 p F 1600V	H
C8421	NCF11HZ-224AY	CHIP C CAP.	0.22 µF 50V	Z
C8422	QEKC1CM-106GMZ	E CAP.	10 µF 16V	M
C8423-24	QEKC1CM-107MZ	E CAP.	100 µF 16V	M
C8425-26	QEPC1CM-106MZ	BP E CAP.	10 µF 16V	M
C8501-02	QEPC1HM-105GMZ	BP E CAP.	1 µF 50V	M
C8503	QEKC1CM-107MZ	E CAP.	100 µF 16V	M
C8504	QEKC1CM-336MZ	E CAP.	33 µF 16V	M

⚠ Symbol No.	Part No.	Part Name	Description	Local
D I O D E				
D8101-04	MA3120-W	ZENER DIODE		
D8106	MA3120-W	ZENER DIODE		
D8107	RD9.1E(B2)-T2	ZENER DIODE		
D8110-11	MA151K-W	DIODE		
D8112-15	MA3120-W	ZENER DIODE		
D8201-04	RD6.8E(B3)-T2	ZENER DIODE		
D8251-54	RD6.8E(B3)-T2	ZENER DIODE		
D8405-07	MA151K-W	DIODE		
D8501-04	MA3068(M)-W	ZENER DIODE		
T R A N S I S T O R				
Q8102	2SA1022(BC)-W	SI.TRANSISTOR		
Q8103	2SC2778(BC)-W	SI.TRANSISTOR		
Q8104	2SA1022(BC)-W	SI.TRANSISTOR		
Q8201	DTA144TK-W	DIGI TRANSISTOR		
Q8202-03	DTC363TK-W	DIGI TRANSISTOR		
Q8251-52	DTC363TK-W	DIGI TRANSISTOR		
Q8253	DTA144TK-W	DIGI TRANSISTOR		
Q8402-03	DTC363TK-W	DIGI TRANSISTOR		
Q8404	2SA1022(BC)-W	SI.TRANSISTOR		
Q8405-06	2SC2778(BC)-W	SI.TRANSISTOR		
I C				
IC8101	CXA1545AS	I.C(MONO-ANA)		
IC8301	VUC2003	I.C(MONO-ANA)		
IC8401	TDA7314J	I.C(DIGI-OTHER)		
IC8501	XRA15218N	I.C(MONO-ANA)		
O T H E R S				
	CM22678-A02-V0	AV TERMI. BOARD		
	SBSB3010M	TAPPING SCREW	×5	
	CE42400-00A	RF SW ASSY	ANT IN A&B	
CN8005	CHA401N-35R-J	HQF SOCKET	CONNECTOR	
J8801	CEMN050-001	PIN JACK	INPUT1	
J8802	CEMN044-001	PIN JACK	INPUT2	
J8803	CEMN045-001	PIN JACK	LINE OUT	
J8804	CEMN057-001	PIN JACK	AUDIO OUT(Vari.)	
J8805	QMCC008-C01	DIN JACK	S-VIDEO	
J8807	AX49607-020	MINI JACK	AV COMPULINK(AUDIO)	
J8808	AX49607-020	MINI JACK	AV COMPULINK(VCR)	
J8809	CEMT016-001	PUSH TERMINAL	SP TERMINAL	
S8801	QSS4C23-C06	SLIDE SWITCH	SURR/MAIN	

FRONT AV IN PW BOARD ASS'Y (SGX8301A(H2))

⚠ Symbol No.	Part No.	Part Name	Description	Local
O T H E R S				
	CM34790-00A-H	A/V TERMINAL		

LINE FILTER PW BOARD ASS'Y (SGX9111A(H2))

⚠	Symbol No.	Part No.	Part Name	Description	Local
		RESISTOR			
⚠	R9990	ERZ-C10DK361U	ZINC N R.		
		CAPACITOR			
⚠	C9901	QFZ9036-104M	M F CAP.	0.1 µ FAC250V	M
⚠	C9902	QFZ9036-473M	M F CAP.	0.047 µ FAC250V	M
⚠	C9903	QFZ9036-473M	M F CAP.	0.047 µ FAC250V	M
⚠	C9904	QFZ9036-473M	M F CAP.	0.047 µ FAC250V	M
⚠	C9905	QCZ9033-222A	C CAP.	2200 p FAC125V	M
⚠	C9906	QCZ9033-222A	C CAP.	2200 p FAC125V	M
⚠	C9907	QCZ9033-222A	C CAP.	2200 p FAC125V	M
⚠	C9908	QCZ9033-222A	C CAP.	2200 p FAC125V	M
	C9909	QFZ9036-473M	M F CAP.	0.047 µ FAC250V	M
		OTHERS			
⚠	F9901	QMF66U1-4R0S	FUSE	4.0A	
⚠	LF9901	CE40248-00B	LINE FILTER		
⚠	LF9903	CE41506-00AJ1	LINE FILTER		
⚠	TH9901	CEKP001-001J1	P.THERMISTOR		

DBF PW BOARD ASS'Y (SGX9202A(H2))

⚠	Symbol No.	Part No.	Part Name	Description	Local
		VARIABLE RESISTOR			
	R9504	QVPA803-503M	V R(H.MODULATION)	50k Ω B	
		RESISTOR			
⚠	R9544	QRD123J-823SX	C R	82k Ω 1/2W J	
	R9545-46	QRD123J-823SX	C R	82k Ω 1/2W J	
	R9553	QRZ0039-562	COMP.R	5.6k Ω 1/2W K	
	R9564	QRD123J-823SX	C R	82k Ω 1/2W J	
	R9579	QRD123J-823SX	C R	82k Ω 1/2W J	
		CAPACITOR			
⚠	C9501	QFM72DJ-683M	M CAP.	0.068 µ F 200V J	
	C9503	QFV71HJ-104MZ	TF CAP.	0.1 µ F 50V J	
⚠	C9512	QFZ0117-1002S	MPP CAP.	0.01 p F 1.4kVH ± 2.5%	
	C9515	QFZ0117-1001S	MPP CAP.	1000 p F 1.4kVH ± 2.5%	
	C9517	QFV71HJ-124MZ	TF CAP.	0.12 µ F 50V J	
⚠	C9520	QCZ0133-102A	C CAP.	1000 p F 15kV	
		TRANSFORMER			
	T9501	CE41576-00AJ1	H PICKUP TRANSF		
		DIODE			
	D9501-02	1SS81-T2	SI.DIODE		
⚠	D9504	ES1F	SI.DIODE		
	D9506	1SS133-T2	SI.DIODE		
⚠	D9509	ES1F	SI.DIODE		
	D9511	1SS133-T2	SI.DIODE		
		TRANSISTOR			
	Q9501-02	2SC1740(QR)-T	SI.TRANSISTOR		
	Q9508	2SA933(QR)-T	SI.TRANSISTOR		
	Q9509	2SC1740(QR)-T	SI.TRANSISTOR		
	Q9510	2SC4256	SI.TRANSISTOR		
⚠	Q9511	2SC4256	SI.TRANSISTOR		
	Q9515	2SA933(QR)-T	SI.TRANSISTOR		
	Q9516-17	2SC1740(QR)-T	SI.TRANSISTOR		
		OTHERS			
⚠	FR9539	QRH127J-101M	F R	100 Ω 1/2W J	
	SG9501	CE41680-302	ARESTOR		

MTS PW BOARD ASS'Y (SGY6002A(H2)) With in MAIN PW BOARD ASS'Y.

This pw boards are supplied as assemblies.

The component parts only the PW boards are available only when the parts are listed in the " PRINTED WIRING BOARD PARTS LIST"

⚠ Symbol No.	Part No.	Part Name	Description			Local
VARIABLE RESISTOR						
R6626	QVPE604-103J4	V R(MOD.F.300HZ)	10kΩ	B		
R6627	QVPE604-502J4	V R(MOD.F.3KHZ)	5kΩ	B		
R6628	QVPC609-303H	V R(FILTER)	30kΩ	B		
R6629	QVPC609-503H	V R(VCO)	50kΩ	B		
RESISTOR						
R6603	QRV141F-4302AY	MF R	43kΩ	1/4W	F	
R6608	QRV141F-6201AY	MF R	6.2kΩ	1/4W	F	
R6609	QRV141F-3901AY	MF R	3.9kΩ	1/4W	F	
R6610-11	QRV141F-4702AY	MF R	47kΩ	1/4W	F	
CAPACITOR						
C6601	QEKC1HM-475GMZ	E CAP.	4.7μF	50V	M	
C6602	QFLC1HK-123MZ	M CAP.	0.012μF	50V	K	
C6603	QFN31HK-562ZJ1	M CAP.	5600pF	50V	K	
C6604	QEP61HM-474GMZ	BP E CAP.	0.47μF	50V	M	
C6605	QEKC1CM-476MZ	E CAP.	47μF	16V	M	
C6607	QFN31HK-272ZJ1	M CAP.	2700pF	50V	K	
C6608	QEKC1HM-475GMZ	E CAP.	4.7μF	50V	M	
C6609	QEE61CK-106BZ	TAN.CAP.	10μF	16V	K	
C6610	QEE61CK-335BZ	TAN.CAP.	3.3μF	16V	K	
C6611	QEKC1HM-105GMZ	E CAP.	1μF	50V	M	
C6612-13	QEKC1HM-475GMZ	E CAP.	4.7μF	50V	M	
C6614	QFLC1HK-473MZ	M CAP.	0.047μF	50V	K	
C6615-18	QEKC1HM-475GMZ	E CAP.	4.7μF	50V	M	
TRANSISTOR						
Q6601-03	2SC2785(JH)-T	SI.TRANSISTOR				
IC						
IC6601	CXA1124BS	I.C(MONO-ANA)				

MODULE PW BOARD PARTS LIST

The following module pw boards are supplied as assemblies.

The component parts only the module PW boards are available only when the parts are listed in the "MODULE PRINTED WIRING BOARD PARTS LIST".

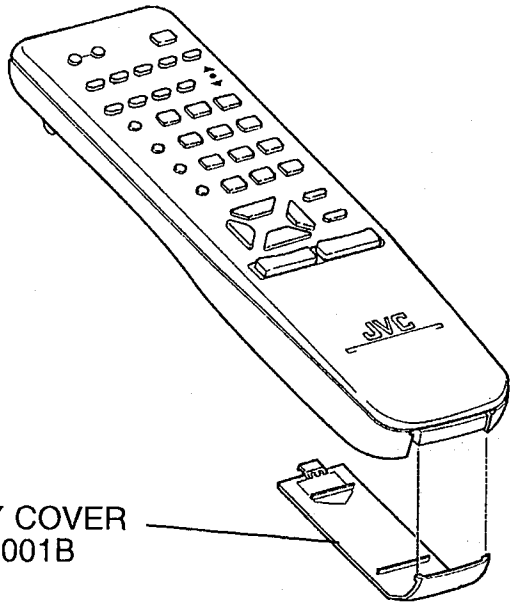
CLOSED CAPTION MODULE PW BOARD ASS'Y (SGXT003A(H2)) with in MAIN PW BOARD ASS'Y.

IF MODULE PW BOARD ASS'Y (SGX-F006A-H2) with in MAIN PW BOARD ASS'Y.

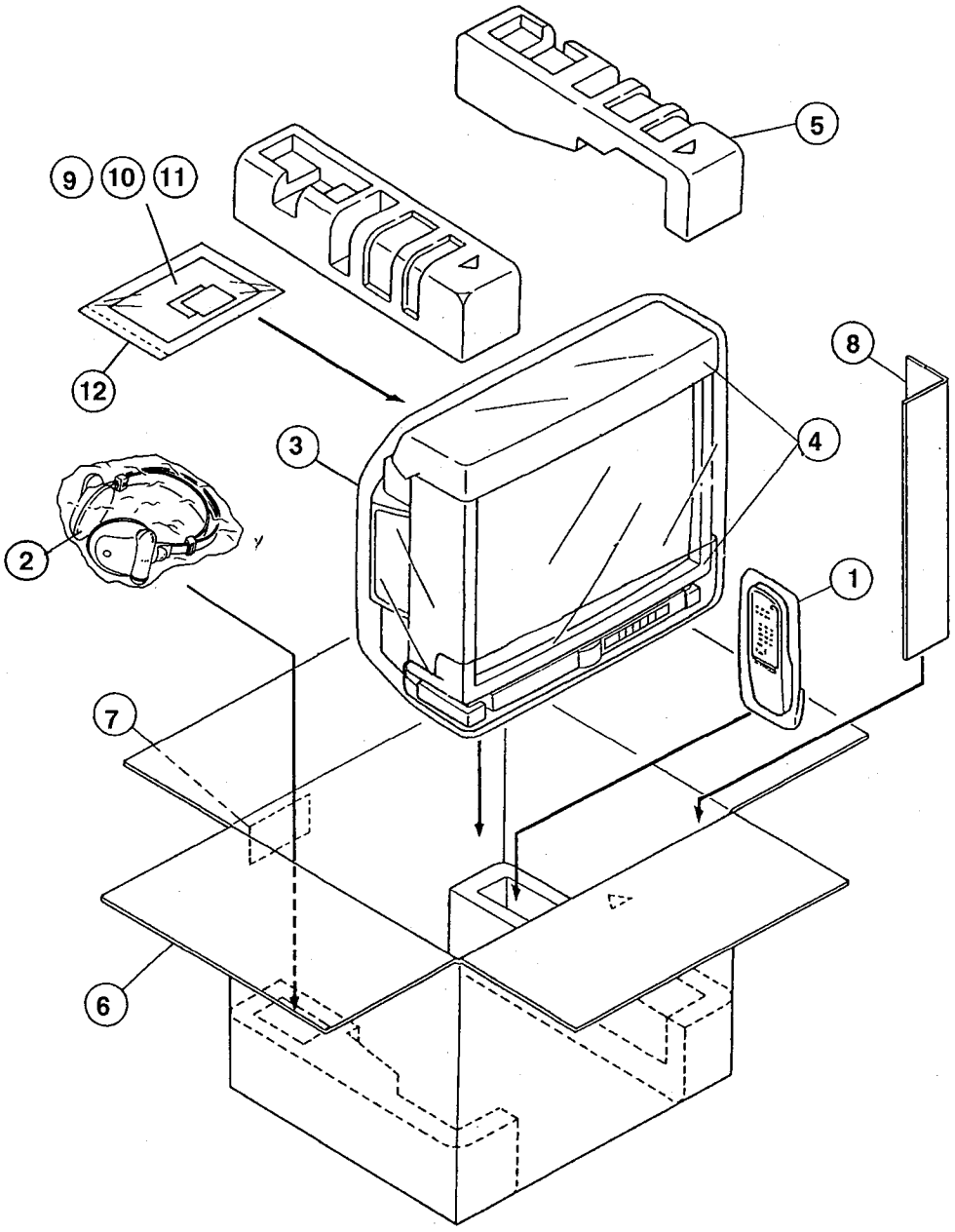
PIP MODULE PW BOARD ASS'Y (SGX-P001A8)

⚠ Symbol No.	Part No.	Part Name	Description	Local
VARIABLE RESISTOR				
R1022	QVPE605-102H	TRIM R(PIP TINT)	1kΩ B	
R1023	QVPE605-502H	TRIM R(PIP COLOR)	5kΩ B	
R1234-35	CEVP005-223XM	CH V R(WHITE BALANCE)	22kΩ B	

REMOTE CONTROL UNIT (RM-C672-01-KH)



PACKING



PACKING PARTS LIST

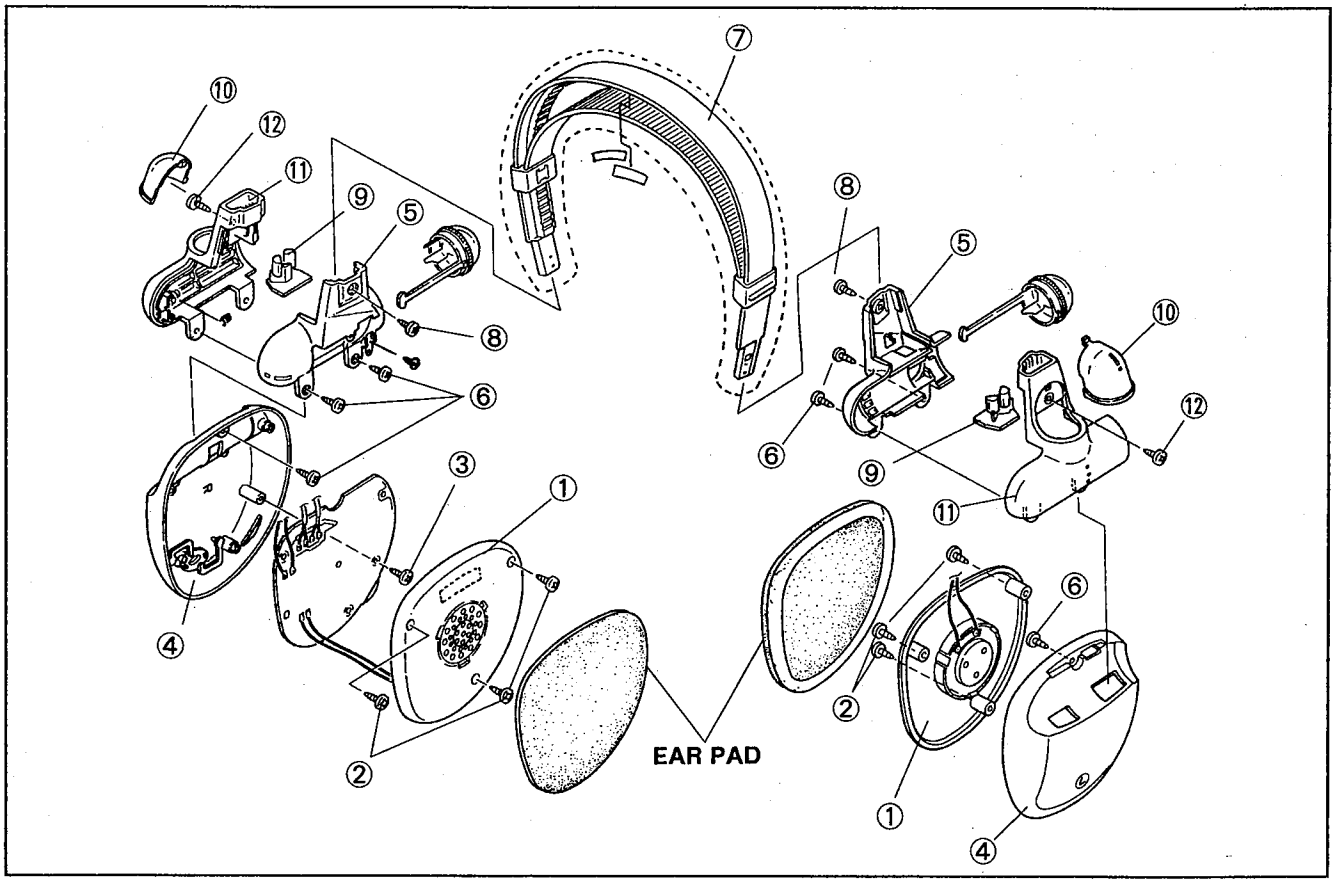
⚠ Ref.No.	Part No.	Part Name	Description	Local
1	RM-C672-01-KH	REMOCON UNIT		*
2	CE30206-00A-KD	CORDLESS HEADPHONE	HA-W55T	*
3	CP30093-003-A	POLY BAG		*
4	CP30055-002-A	TOP COVER	×2	*
5	CP10780-B0A-A	CUSHION ASSY	4pcs in 1set	*
6	CP10972-066-A	PACKING CASE		*
7	CM31900-00A-A	REC KEEPING CARD		*
8	CP30801-003-A	SUPORT CORNER	×4	*
9	2731X35H4IBA-A	INST BOOK		*
10	CEAC012-150J1	PLUG CABLE		*
11	BT-51006-1	REGISTRATION CARD		
12	CM30751-010	POLY BAG		

CORDLESS HEADPHONE (RECEIVER) SPECIFICATIONS

Item	Content
Infrared wavelength	850 nm
Modulation system	Frequency modulation
Carrier frequency	
L-channel	2.3 MHz
R-channel	2.78 MHz
Usable area	
(Distance to reach)	Approx. 10m
Frequency response	18-22,000 Hz
Distortion	Less than 1% (at 1 kHz)

Item	Content
Type	Moving coil
Diaphragm	30 mm dia.
Power requirements	SUM-3/R6/AA battery (1.5 V) ×2
Battery life	Approx. 45 hours (with provided batteries)
Weight	170 g (6.0 oz) (with batteries)

DISASSEMBLY PROCEDURE



REMOVING THE MAIN PWB ASSY (R)

-----Main PWB Ass'y is only in (R) housing.

1. Remove earpad gently (, so as not to tear ear pad)
   If ear pad is tight, remove a part of ear pad and remove one of three screws ②.
2. Remove three screws ② retaining driver unit ass'y ①.
3. Remove a screw ③ retaining the main PWB ass'y and remove it.

REMOVING THE SUB PWB ASS'Y

(Infrared Receptor)

1. Remove three screws ⑥ retaining housing ④ and honger ⑪.
2. Remove a screw ⑧ retaining hunger cover ⑤ and headband ⑦.
3. Remove sub PWB ass'y ⑨ and filter ⑩ from the inside.
4. Remove a screw ⑫ retaining huger ⑪ and headband ⑦.

SERVICE ADJUSTMENTS [HEADPHONE (HA-W55T)]

TOOLS AND FIXTURES FOR ADJUSTMENT

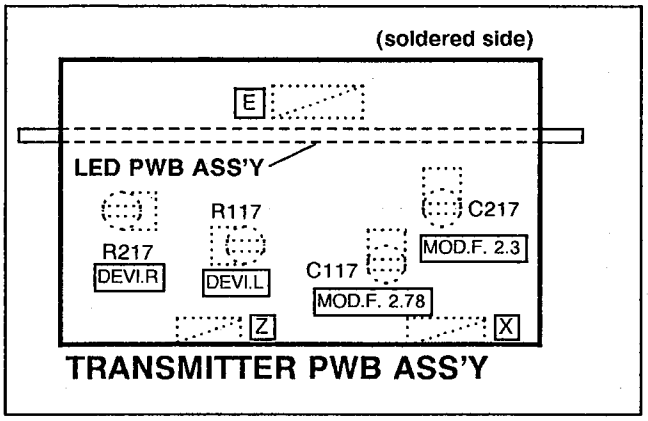
MEASURING INSTRUMENTS

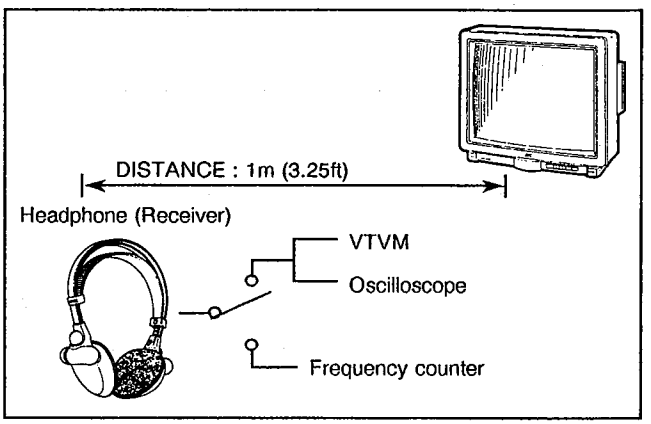
1. Audio Signal Generator
2. VTVM
3. Oscilloscope
4. Frequency Counter

NOTE

1. Remove connector [Z] befor adjustment.
2. Refer to the following PWB PATTERN & CIRCUIT DIAGRAM
   : HEADPHONE PWB PATTERN page 2-35 & CIRCUIT DIAGRAM page 2-36 on STANDARD CIRCUIT DIAGRAM.

ADJUSTMENT LOCATION & MEASUREMENT SET UP





ADJUSTMENT

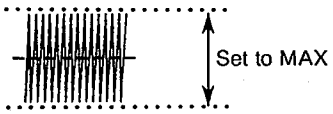
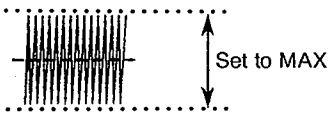
Item	Measuring instrument	Test point	Adjustment part	Description
TRANSMITTER CIRCUIT				
FREQ. MODULATION	FREQ. COUNTER	[E] CONNECTOR ① = (R) ③ = (L)	2.78 MODU.F (R) (C117) 2.3 MODU.F (L) (C217)	(RIGHT) 1. Connect the frequency counter to [E] 1 connector. 2. Adjust the TRIMMER (2.78 MODU.F) so that the reading of the frequency counter is 2.78 MHz. (LEFT) 3. Change to connect to [E] 3 connector. 4. Adjust the TRIMMER (2.3 MODU.F.) so that the reading of the frequency counter is 2.3 MHz.
DEVIATION	VTVM AUDIO SIGNAL GENERATOR	[Z] CONNECTOR ① = (R) ③ = (L) Pin ㉑ of IC201/IC101 [RECEIVER PWB]	DEVIATION VR (R) (R117) DEVIATION VR (L) (R217) [TRANSMITTER PWB]	(RIGHT) 1. Input sign wave signals of 400 Hz/500 mVrms to [Z] 1 connector on the TRANSMITTER PWB. 2. Connect the VTVM to pin ㉑ of IC201 on the headphone (receiver) circuit. 3. Receive the signals with the headphone (receiver) and adjust DEVIATION VR (R) so that the output from pin ㉑ of IC201 on the headphone (receiver) circuit is 80 mVrms. (LEFT) 4. Input sign wave signals of 400 Hz/500 mVrms to [Z] 3 connector on the TRANSMITTER PWB. 5. Connect the VTVM to pin ㉑ of IC101 on the headphone (receiver) circuit. 6. Receive the signals with the headphone (receiver) and adjust DEVIATION VR (L) so that the output from pin ㉑ of IC101 on the headphone (receiver) circuit is 80 mVrms.

ADJUSTMENT

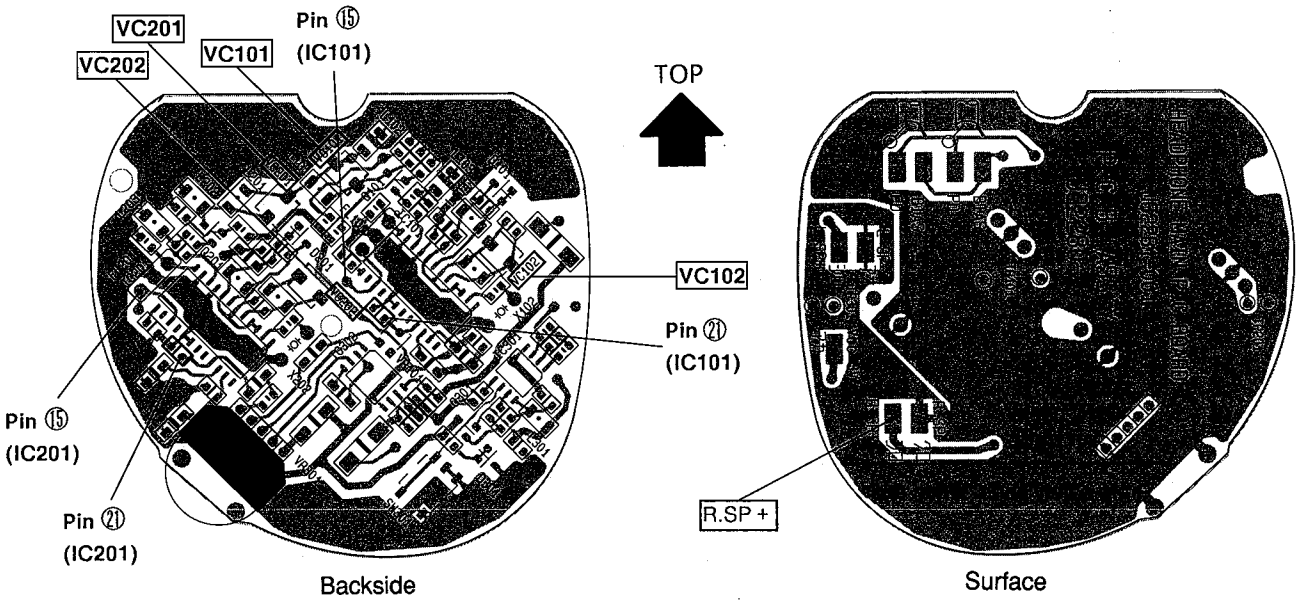
Item	Measuring instrument	Test point	Adjustment part	Description

HEADPHONE (RECEIVER)

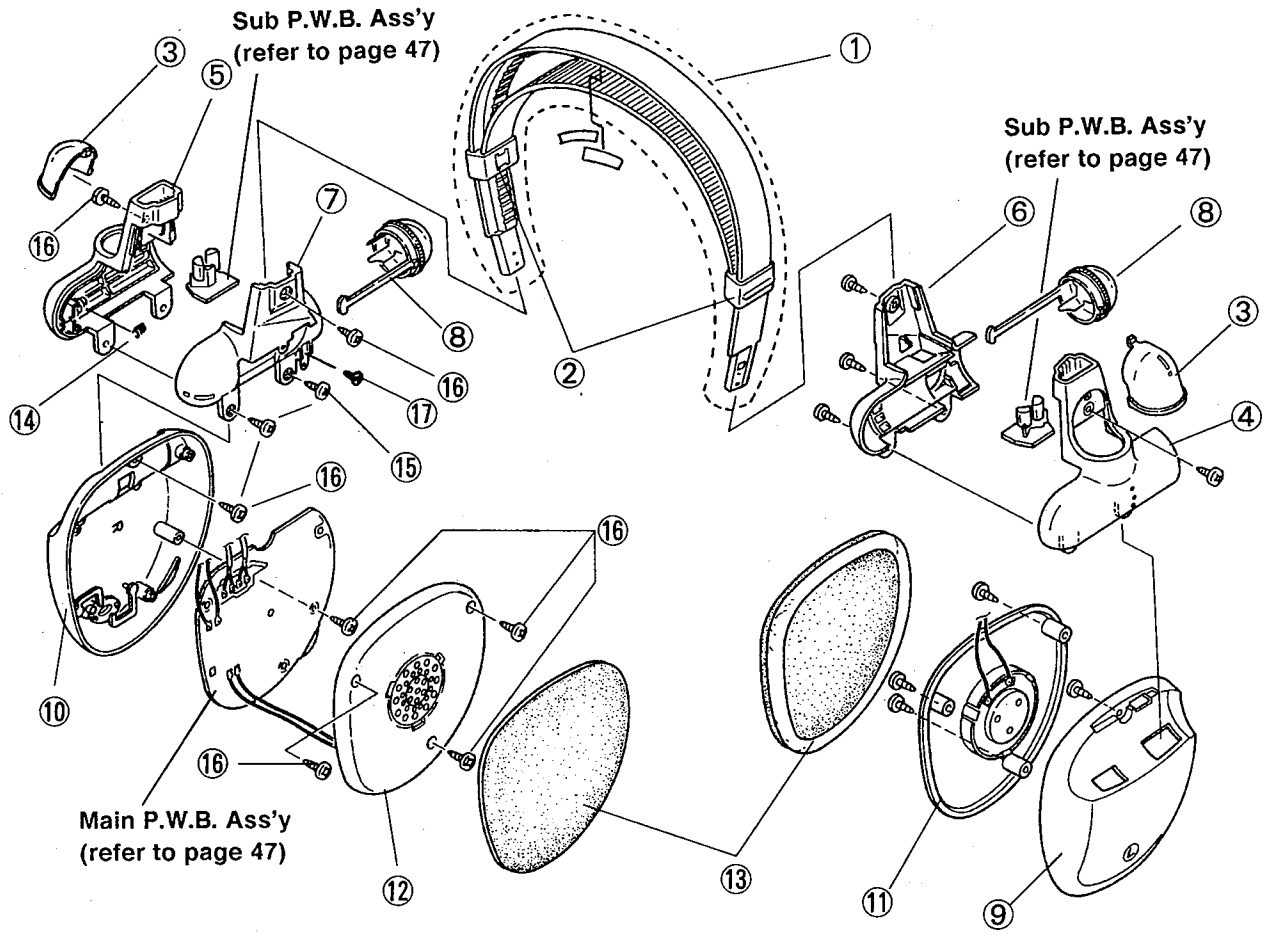
Adjustment condition : Set the volume controls of the headphones (receiver) so that the output (R.SP +) is − 10 dBV when 400Hz, − 6 dBV signal is input to the transmitter.

I.F (L-CH)	FREQ. COUNTER	Pin ⑮ (IC101)	VC102	1. Connect the frequency counter to pin ⑮ of IC101. 2. Adjust VC102 so that the frequency counter reads 10.685 MHz.
TUNED (L-CH)	OSCILLO-SCOPE	Pin ⑮ (IC101)	VC101	1. Connect the oscilloscope to pin ⑮ of IC101. 2. Adjust VC101 so that the oscilloscope reading is maximum. 
I.F (R-CH)	FREQ. COUNTER	Pin ⑮ (IC201)	VC202	1. Connect the frequency counter to pin ⑮ of IC201. 2. Adjust VC202 so that the frequency counter reads 10.715 MHz.
TUNED (R-CH)	OSCILLO-SCOPE	Pin ⑮ (IC201)	VC201	1. Connect the oscilloscope to pin ⑮ of IC201. 2. Adjust VC201 so that the oscilloscope reading is maximum. 

Headphone PWB



EXPLODED VIEW [HEADPHONES]



MECHANICAL PARTS LIST

⚠	Item No.	Parts No.	Parts Name	Q'ty	Description
	1	J32342-001	Headband Ass'y	1	
	2	J32284-001	Slider	2	
	3	J32285-001	Filter	2	
	4	J11198-001	Hanger (L)	1	
	5	J11199-001	Hanger (R)	1	
	6	J21368-001	Hanger Cover (L)	1	
	7	J21369-001	Hanger Cover (R)	1	
	8	**J32286-001**	Battery Cap	2	With Battery Terminal (+)
	9	**060-11160-03**	Housing (L)	1	
	10	**060-11161-03**	Housing (R) Ass'y	1	With Switch Knob & LED Lens
	11	J32343-001	Driver Unit Ass'y (L)	1	
	12	J32344-001	Driver Unit Ass'y (R)	1	
	13	J32289-001	Ear Pad	2	
	14	J45592-001	Battery Terminal (–)	2	
	15	J45593-001	Battery Plate	2	
	16	SPSN2050M	Screw	17	
	17	SPSN1725N	Screw	2	

* Parts marked (⚠) are safety parts. When replacing, be sure to use the specified one.

HEADPHONE (RECEIVER) PARTS LIST

MAIN PWB ASS'Y (J32280-001)

⚠ Symbol No.	Parts No.	Parts Name	Description
ICs			
IC101	CX20111	IC	Sony
IC201	CX20111	IC	Sony
IC301	BU2305F	IC	Rohm
IC302	CXA1289M	IC	Sony
TR. & FETs			
Q101	2SK209GR	FET	
Q201	2SK209GR	FET	
Q301	2SA1162GR	Transistor	
Diodes			
D101	1SS226	Diode	
D201	1SS226	Diode	
D301	SLM-13VWFT97	LED	
Resistors			
R101	NRSA02J-561NY	M.G. Resistor	100
R102	NRSA02J-102NY	M.G. Resistor	1K
R103	NRSA02J-101NY	M.G. Resistor	100
R104	NRSA02J-101NY	M.G. Resistor	100
R201	NRSA02J-561NY	M.G. Resistor	100
R202	NRSA02J-102NY	M.G. Resistor	1K
R203	NRSA02J-101NY	M.G. Resistor	100
R204	NRSA02J-101NY	M.G. Resistor	100
R205	NRSA02J-153NY	M.G. Resistor	15K
R301	NRSA02J-274NY	M.G. Resistor	270K
R302	NRSA02J-564NY	M.G. Resistor	560K
R303	NRSA02J-102NY	M.G. Resistor	1K
R304	NRSA02J-473NY	M.G. Resistor	47K
R305	NRSA02J-222NY	M.G. Resistor	2.2K
R307	NRSA02J-471NY	M.G. Resistor	470
VR101	J45631-333	Semi Fixed Resistor	33K
VR301	J45632-103	Volume	10K/RK10J(TWIN)
Capacitors			
C101	NCT03CH-050	Cer. Capacitor	5pF CH/50V
C102	NCT21HK-223NY	Cer. Capacitor	0.022μF/50V
C103	NCT03CH-102	Cer. Capacitor	0.001μF CH/50V
C104	NCT21HK-223NY	Cer. Capacitor	0.022μF/50V
C105	NCT21HK-223NY	Cer. Capacitor	0.022μF/50V
C106	NEF10GM-106RY	TA E. Capacitor	10μF/4V
C107	NCT03CH-560	Cer. Capacitor	56pF CH/50V
C108	NCT03SH-330	Cer. Capacitor	33pF SH/50V
C109	NCF31HZ-333AY	Cer. Capacitor	0.033μF/50V
C110	NEF10GM-106RY	TA E. Capacitor	10μF/4V
C111	NEF10GM-106RY	TA E. Capacitor	10μF/4V
C113	NCT21HK-223NY	Cer. Capacitor	0.022μF/50V
C114	NCF21HZ-104NY	Cer. Capacitor	0.1μF/50V
C115	NCF21HZ-104NY	Cer. Capacitor	0.1μF/50V
C116	NEA10GM-227RZ	AL E. Capacitor	220μF/4V
C202	NCT21HK-223NY	Cer. Capacitor	0.022μF/50V
C203	NCT03CH-681	Cer. Capacitor	680pF CH/50V
C204	NCT21HK-223NY	Cer. Capacitor	0.022μF/50V
C205	NCT21HK-223NY	Cer. Capacitor	0.022μF/50V
C206	NEF10GM-106RY	TA E. Capacitor	10μF/4V
C207	NCT03CH-470	Cer. Capacitor	47pF CH/50V
C208	NCT03TH-270	Cer. Capacitor	27pF TH/50V
C209	NCF31HZ-333AY	Cer. Capacitor	0.033μF/50V
C210	NEF10GM-106RY	TA E. Capacitor	10μF/4V
C211	NEF10GM-106RY	TA E. Capacitor	10μF/4V
C213	NCT21HK-223NY	Cer. Capacitor	0.022μF/50V
C214	NCF21HZ-104NY	Cer. Capacitor	0.1μF/50V
C215	NCF21HZ-104NY	Cer. Capacitor	0.1μF/50V
C216	NEA10GM-227RZ	AL E. Capacitor	220μF/4V
C301	NCT21HK-472NY	Cer. Capacitor	0.0047μF/50V
C302	NCT21HK-223NY	Cer. Capacitor	0.022μF/50V
C303	NCT21HK-223NY	Cer. Capacitor	0.022μF/50V
C304	NCT21HK-223NY	Cer. Capacitor	0.022μF/50V
C305	NCT21HK-223NY	Cer. Capacitor	0.022μF/50V
C306	NEF10GM-106RY	TA E. Capacitor	10μF/4V
C307	NEA10GM-107RZ	AL E. Capacitor	100μF/4V
VC101	J45629-500	Trimer	50pF/50V:Matsushita
VC102	J45629-100	Trimer	10pF/50V:Matsushita
VC201	J45629-500	Trimer	50pF/50V:Matsushita
VC202	J45629-100	Trimer	10pF/50V:Matsushita

⚠ Symbol No.	Parts No.	Parts Name	Description
Inductors			
L101	J45630-680	Coil	68μH
L102	J45630-390	Coil	39μH
L103	J45630-680	Coil	68μH
L104	J45630-680	Coil	68μH
L105	J45630-3R3	Coil	3.3μH
L201	J45630-820	Coil	82μH
L202	J45630-101	Coil	100μH
L203	J45630-680	Coil	68μH
L204	J45630-680	Coil	68μH
L205	J45630-3R3	Coil	3.3μH
L301	J45630-101	Coil	100μH
Others			
FL101	J45219-001	Ceramic Filter	SFT10.7MS3A
X101	J45220-001	Ceramic Oscillator	CDA110.7MC1-A
FL201	J45219-001	Ceramic Filter	SFT10.7MS3A
X201	J45220-001	Ceramic Oscillator	CDA110.7MC1-A
SW301	J45633-001	Tact Switch	Alps

SUB PWB ASS'Y (LEFT) (J45586-001)

⚠ Symbol No.	Parts No.	Parts Name	Description
Diodes			
D102	PFC502	Pin Photo Diode	Pan Electronics
D103	PFC502	Pin Photo Diode	Pan Electronics

SUB PWB ASS'Y (RIGHT) (J45586-001)

⚠ Symbol No.	Parts No.	Parts Name	Description
Diodes			
D202	PFC502	Pin Photo Diode	Pan Electronics
D203	PFC502	Pin Photo Diode	Pan Electronics

OTHERS

⚠ Symbol No.	Parts No.	Parts Name	Description
	J45634-001	Sield Wire	φ1.5x70
	J45635-001	Sield Wire	φ1.5x450
	J45636-001	Lead Wire	Red/φ0.8x100
	J45637-001	Lead Wire	Black/φ0.8x100
	J45638-001	Lead Wire	White/φ0.8x100
	J45645-001	2 Core Sield Wire	φ2x510

* Parts marked (⚠) are safety parts. When replacing, be sure to use the specified one.

JVC SERVICE & ENGINEERING COMPANY OF AMERICA
DIVISION OF US JVC CORP.

Head office (East Coast)	: 107 Little Falls Road, Fairfield, New Jersey 07004	(201)808-9279
Midwest	: 705 Enterprise St. Aurora, Illinois 60504	(708)851-7855
West Coast	: 5665 Corporate Avenue, Cypress, California 90630	(714)229-8011
Southeast	: 1500 Lakes Parkway, Lawrenceville, Georgia 30243	(404)339-2522
Hawaii	: 2969 Mapunapuna Place, Honolulu, Hawaii 96819	(808)833-5828

JVC

AV35BH4U-SHA

Printed in Jap.
9307 VP
NP0342